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THE

PROBLEM OF PROBLEMS,

AND ITS

VARIOUS SOLUTIONS;

OR,

ATHEISM, DARWINISM, AND THEISM.

By CLARK BRADEN.
PRESIDENT OF ABINGDON COLLEGE, ILLINOIS.

CENTRAL BOOK CONCERN,
CINCINNATI, O. OSKALOOSA, IOWA.
1879.

wP

TYNDALL'S

STATEMENT OF THE EVOLUTION HYPOTHESIS.

What are the core and essence of the Evolution Hypothesis? Strip it *naked*, and you will stand face to face with the *notion* that not alone the more ignoble forms of animalcular and animal life—not alone the noble forms of the horse and the lion—not alone the wonderful and exquisite mechanism of the human body, but the mind itself—emotion, intelligence, and will, were once latent in a fiery cloud. At the present moment, all our philosophy, all our poetry, all our science, all our art—Plato, Shakespeare, Newton, and Raphael, are potential in the fires of the sun.

TYNDALL.

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CONTENTS.

CHAPTER. PAGE.
INTRODUCTION v
I. Statement of the Problem 13
II. Data that must be used in Solving the Problem and in testing the Solution 36
III. Various Solutions of the Problem 63
IV. Relations of Religion and Science and Tendencies of the various hypotheses of Evolution 89
V. Fallacies and Failures of Atheistic and Evolution Hypotheses and solutions 112
VI. The Theistic Solution 226

SUPPLEMENT.

VII. Science and the Fundamental Ideas of Religion 342
VIII. Progress and the Permanence of Religion 370

APPENDIX.

Tyndall's Statement of the Evolution Hypothesis 374
Anthropomorphism of Scientists 374
Objections to the Nebular Hypothesis 375
The Propaganda of Atheistic Scientists 376
Is the God Idea an Intuition? 379
Involution before Evolution 379
Three Ways of getting rid of Intelligence in Evolution 380
Reasons why certain tribes have been called Atheistic 381
Another Subterfuge of Evolutionists 381
Matter and Force not Self-existent, but creations of mind 382
The First Cause not Unknown and Unknowable 388
Underwood's Reductio ad Absurdum 392
Is Religion a Perversion of Man's Nature? 396
Can Physical Science and Evolution give Morality? 398
Draper's Conflict of Religion and Science 400
Biblical Contradiction of Science. Mosaic Record of Creation. Noachian Deluge. Joshua's Command 402
Absurdity of Materialism—Anecdote 410
Mill's Absurd Attempt at Wit 411
The Man with Two Wives 412
Mimicry of Nature 413
Blind, Irrational, Insensate Matter and Force 414
Parolles and his Drum 416
Proper Tests of the Two Theories 420
Evolution Hypotheses and Copernican System 421
Another Absurdity in Illustration 422
Review of Huxley's Demonstration of Evolution 423
Review of Carpenter's Fallacies of Testimony for the Supernatural 444
Review of an Atheistic Tract 459
Materialism and Christianity Contrasted 468
Conclusion 477

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special advantages and training for the work he undertakes in this volume. His own skepticism and doubt have given him an insight into the springs, motives and reliances of skepticism, that can be gained only by personal experience. As a lecturer and debater, he has had to meet the best that can be said on the side of skepticism, concerning the topics discussed in this volume. He has been continually called on to answer the objections and questions of the skeptic, and to solve the troubles of the puzzled believer. He has a number of times had his arguments in defense of what he conceived to be the truth, canvassed by the ablest skeptical minds of our country. He has been compelled, by the demands of his work, to study for years, all that he could collect on these topics, and as only those study who have been compelled to make these topics a specialty that they may defend the truth. For a number of years he has been urged to write out and publish his lectures on these topics, and especially the ones discussed in this volume. In compliance with the request of many of his own and other denominations, he has written this book, in the hope that it will aid the cause of truth in the great struggle that is now agitating this and other lands. He has been impelled to write the book, by a conviction that of all the multitude of books written, not one meets a real want felt by himself and others. He has endeavored to give the reader what he has collected to meet his own wants.

In this volume the author endeavors, in the first chapter, to give a concise but full view of the nature, extent and demands of the problem, for which modern skeptical science attempts to furnish a solution, and to give the reader a clear conception of what must be accounted for before the problem is solved. This has never been done completely and thoroughly, and in a connected manner. Glimpses of it have been given in detached portions in multitudes of books. In reviewing the assertions and assumptions of skepticism, writers have occasionally pointed out something for which the speculations of the skeptic had no solution, but the boundless proportions of the problem have never been presented in one connected view. The result has been that the readers of the countless productions of modern skepticism, having no clear conception of the infinite proportions of the problem, have readily and easily accepted the strange and startling phenomena collected by Darwin and others, and the plausible speculations they base on them, as a full solution of the infinite problem of the universe. Then the first thing to be done is to place clearly before the reader the infinite proportions and demands of the problem, for which the speculations of the materialistic scientist are offered as a pretended solution, that he may clearly apprehend its extent and nature, and by a comparison of the speculations of the scientist with it, apprehend their flimsiness and meagerness, and appreciate their utter failure as even a plausible speculation. He will see that they have no explanation for the real difficulties of the problem, and in fact they leave them utterly untouched. The work attempted in the first chapter is a vital and fundamental one.

In the second chapter the author endeavors to present the postulata and data that we have and must use in solving the problem, and without which a solution is impossible. The great principle of a true inductive philosophy, which the scientist professes to take as his guide, is that we should carefully examine the phenomena, being careful to include all of them, and by such examination learn their nature and characteristics, and from their characteristics determine their cause, using in the solution all the phenomena and all the aids we can obtain. While pretending to take human nature as his standard in his investigations and speculations, and human reason as his means of investigation, the skeptical scientist ignores the religious and spiritual element of our nature, and utterly discards the plainest utterances and intuitions of the highest—the regnant element of our nature. Then, in the second chapter, we insist on a full statement of all the phenomena, moral, rational, religious, and spiritual, as well as physical, that we may have all the data and a full use of all the elements of our nature. This is especially important, since the elements of our nature, ignored by the scientist, are the very ones and the only ones that can solve the problem. The great questions of causation and creation, intelligent causation and creation, can be solved only under the guidance and direction of pure reason, and the rational, moral, and religious elements of our nature, and chiefly by them. We shall endeavor to show that so long as the scientist pursues his present course he can only inform us of the manner in which the phenomena transpire, but is utterly impotent to tell what caused them and why they transpire.

In the third chapter we attempt a brief outline of the various solutions of the problem that have been offered for our acceptance. We have been careful to define evolution, development, Darwin's hypothesis, and kindred speculations, with especial reference to the technical use that their advocates make of them, that the reader may ever after be guarded against the common blunder of confounding these analogous speculations that are used technically in different senses. The reader has before him, then, the different solutions, and is prepared to compare them with the demands of the problem, and ready to examine them and test them by means of the data furnished him by the second chapter. In the fourth chapter the natural affinities of evolution, development, and Darwinism are exhibited, and their tendencies clearly pointed out, that all may understand their real nature. In the fifth chapter we have endeavored to classify the objections that can be urged against evolution, development, and Darwinism. These have been gathered from all the different departments of investigation, as fully as the author's ability and opportunities would permit, and classified so that the reader can see what can be said against these arrogant speculations, for which we are almost commanded to unship the faith of centuries and cast to one side the universal intuitions and the highest aspirations of the noblest and regnant element of our nature. We have arranged them as they would be naturally suggested in tracing the course of evolution claimed by the materialist. We could of course give only an outline of each objection, but we have endeavored to present the warp of the web of argument so clearly that the intelligent reader will be able to supply the woof.

In the sixth chapter we have attempted a *resume* of the theistic solution, adapted to the present state of the discussion and the demands of the thought of the day. Particular attention is paid to the objections of Spencer and others of the present time. In the seventh chapter we have endeavored to show that modern discovery and scientific generalization does not demand or warrant a casting to one side of the cardinal ideas of religion; but, on the contrary, they only amplify and establish them.

In the eighth and concluding chapter we endeavor to show that progress and discovery can not outgrow a religion of general principles and universal and eternally applicable truths. Then if we have accomplished our purpose, we shall have led the reader through a train of reasoning that will not only show that the assaults of modern skeptical science (falsely so called) on our religious nature and faith are baseless, but also show that our faith is based on and grounded in the clearest and deepest and strongest affirmations of the noblest and the regnant element of our nature. The author believes that the course he has pursued is the only logical, and of course the proper method of conducting the examination of this problem of problems and its various solutions. He has endeavored to avoid technical and scientific terms and disquisitions, and if the reader wishes for an elaborate discussion of many of the objections urged in the book, against the speculations of modern science, he is referred to the works of authors who have often devoted a volume to an objection, the substance of which is here presented in a few lines.

We will conclude this introductory chapter by giving a parable we often use to illustrate the course of the scientist, and in this way prepare the reader for the following chapters. An amateur in mathematics once submitted to the inspection of his friends certain mathematical operations and equations, in which he claimed that he had solved some of the most profound problems in several departments of science. As they were quite intricate, and displayed great skill in mathematical manipulations, and as the conclusions that he claimed he had reached accorded with the wishes and views of some of his friends, they eagerly accepted and appropriated them, and pressed them into use, and extended them far beyond the claims of their author. But as these conclusions and the use that was made of them were in direct opposition to the most cherished views of all others, they subjected them to a most rigid scrutiny. A skillful mathematician urged the following objections:

I. In the statement of the problem, and many times in subsequent portions of the work, important elements were omitted either through ignorance or were intentionally ignored and rejected.

II. Many and vital points are assumed in the premises on which the work is based, for which no proof is offered or attempted, and they are the very things that should above all else be proved.

III. Others are assumed that are susceptible of but little proof, scarcely enough to render them probable.

IV. Others are assumed that are worthless because many grave and insuperable objections can be urged against them.

V. Others are assumed that are clearly and palpably untrue.

VI. In the manipulation of the equations, and in the reasoning often the things that stood most in need of proof were assumed, and evidently because they were necessary to establish the conclusion.

VII. Often there was no connection between different parts of the work, or between premises and conclusions.

VIII. Finally, vastly more was claimed in the conclusion than was included in the premises or reasoning, or established by the reasoning, even if these were all conceded to be correct. Such were the objections of the mathematician.

A chemist objected that the operator had ignored the teachings of chemistry in certain parts of his work, and the very principles that were needed to enable him to prosecute his investigations. Without them, investigation was impossible, and unless controlled by them the results must be absurd. An adept in natural philosophy objected that certain assumptions in the work and the conclusions contradicted some of the most palpable and clearly established facts of natural philosophy. A physiologist objected that the mathematician had presumed, by his manipulations of mathematical symbols, to decide some of the gravest problems in physiology, when his work had no connection with these problems. Not only this, but while presuming thus to decide what was utterly foreign to his work, he had deliberately ignored or denied the fundamental principles of physiology, and had rejected its fundamental methods, and the only methods by which investigation could be conducted in trying to solve these problems. Irritated and chagrined by these damaging criticisms of his hobby, and these attacks on the bantling of his brain, the author attempted to overawe his mathematical critic by an assumption of superior mathematical knowledge and by dogmatic assertions. His critic coolly replied that be his superior knowledge ever so great it could not remove one particle of one of his objections. They were unanswered and unanswerable. The author attempted to silence the chemist, physicist, and physiologist by quoting to them the old adage—*Ne sutor ultra crepidam*; "Let not the cobbler get above his last." They retorted, "But these things are our *last*, and pre-eminently our last. You are the one that has violated his own rule. Do you stick to your last? A mere mathematician, you have presumed, by your equations, to decide questions that are utterly foreign to them, and that can have no possible connection with them. You presume to settle the gravest questions in our departments, while most presumptuously ignoring their plainest facts and fundamental methods and principles." But enamored by a certain mathematical skill displayed in the manipulation of the symbols, and inclined by their prejudices to accept the conclusions claimed, because they accorded with their preconceived notions, certain parties persisted in lauding the work thus criticised as the *ne plus ultra* of science and truth, and claimed that its assumptions and begged conclusions were the clearest of truth. In like manner we think it can be shown that the speculations known as evolution and Darwinism are open to the following objections:

I. In the first steps in the investigation, and all through the investigation, important elements, vital factors, are omitted, either through ignorance or they are deliberately ignored and rejected.

II. Many things are assumed in the premises on which they are based, of which there is no proof.

III. Others are assumed that are not susceptible of proof.

IV. Others are assumed that have hardly enough proof to render them even probable.

V. Others are assumed that are worthless on account of grave and often insuperable objections that are urged against them.

VI. Still others are assumed that are most palpably untrue.

VII. Often in the course of reasoning, the very things to be proved, and that need to be proved above every thing else, are quietly assumed.

VIII. Often the things thus assumed are the things needed to establish the conclusion, and are evidently assumed because they are thus necessary to the predetermined conclusion.

IX. Often in the course of reasoning there is no connection between different parts of the process, or between the premises and conclusion.

X. Finally, infinitely more is claimed in the conclusion than is contained in the premises or the reasoning or proved by the speculations, even if all these assumptions and speculations be conceded to be entirely true. Such are the objections that can be urged to the methods of what now arrogantly appropriates to itself the exclusive use of the term *science.*

The student of mental philosophy and psychology can object that the fundamental methods and principles of mental philosophy and psychology are utterly ignored—the only principles and methods by which certain portions of the investigation can be conducted. It is sheer folly to even attempt an investigation, except in accordance with these methods. The moralist can object that some of the clearest and most palpable truths and facts of mental and moral philosophy and phenomena are flatly contradicted, with an assurance that would be sublime if it were not so absurd. The psychologist can urge the same objection.

Some of the clearest and most palpable facts and phenomena of psychology are flatly denied by these men of science, so called. The religionist can object that the scientist presumes to decide by his methods and speculations some of the gravest problems in morals and religion, when his investigations and methods and the facts he reaches by them, have absolutely no connection with them; and he utterly ignores and rejects the plainest truths and facts of mental and moral philosophy and religion. The scientist ignores and rejects the plainest principles and methods of mental and moral philosophy and religion, and denies their clearest and plainest facts and phenomena, and rejects the only principles and methods by which investigation can be conducted in these departments of science, and yet presumes to decide the gravest problems in these departments, by his methods and facts, that have no more connection with them than the rules of grammar have with the manipulation of mathematical equations. If we urge on the scientist the consideration of the ten objections we have enumerated above, and array hundreds of illustrations of them, we are met with an assumption of vast superiority in scientific knowledge. Do n't Darwin and Huxley and Tyndall and Wallace and that school of scientists know? What right have religious men or priests to question their deductions, no matter how many *facts* can be urged against them? It matters not how much they may know, their knowledge can not set to one side palpable facts. It is bootless for the scientist to scream at the student of mental or moral philosophy or religion, "*Ne sutor ultra crepidam,*" for his speculations embrace questions that are peculiarly and pre-eminently the *last* of the students of these departments. It is the scientist that violates with the coolest effrontery the very maxim he so superciliously quotes to others. The careful attention and clearest scrutiny of the reader is invited to the following chapters of this book, in which we attempt to establish the charges here made against modern skeptical science.

THE PROBLEM OF PROBLEMS,

OR,

ATHEISM, DARWINISM AND THEISM.

CHAPTER I.

STATEMENT OF THE PROBLEM.

ONE of the wise utterances of one, who his contemporaries declared spoke as never man spoke, was, that no wise man would begin to build a house before he had carefully calculated the cost, and no prudent monarch would rush into a war before he had carefully calculated and compared his own strength and that of his enemy; and no thoughtful person will accept a solution of a problem, much less risk priceless interests on it, until he carefully weighs the nature and demands of the problem, and thoughtfully compares the proposed solution with the nature and demands of the problem, for which it claims to account. In the last illustration used by the Christ,an army might make an imposing display, and accomplish much in certain cases, but it would be utterly inadequate to cope with an army twice its own strength. If its commander did not understand and appreciate the strength of his enemy, he would certainly be undeceived when too late, and meet with disaster on the field of conflict. In like manner, if persons do not understand and appreciate the full extent and demands of the problem for which the physicist of to-day undertakes to give a solution, they will be apt to be bewildered by the strange and startling phenomena presented by the physicist, and the plausible speculations of evolution, development, and Darwinism presented by him, and led to accept them as a full solution of the infinite problem of the universe. Then let us begin by endeavoring to array before our minds the phenomena, and endeavor to grasp the infinite demands of the problem, for which the advocates of these speculations, either directly or by implication, claim they are a full solution.

One obstacle in the way of a proper comprehension of the vastness and difficulty of the problem, is that by constant contact with the phenomena of nature, and the familiarity arising from such constant contact with its most inscrutable processes, we have lost all apprehension and appreciation of their vastness, their intricacy, and their wonderful mysteries. We have, from the first dawn of observation, witnessed continually transpiring before our eyes, almost unheeded, the most wonderful and mysterious operations of nature, and have never thought perhaps how vast, how wonderful, and how mysterious they are. It is only by a careful and thoughtful survey of them that our minds can be aroused to apprehend, even partially, the infinity in number, the vastness in extent, and the inscrutable mystery in method, of the processes of nature, for which the physicist attempts to account by theory, speculation, and hypothesis. Let us then marshal before us nature in all her various forms, and hold communion with her, and endeavor to prepare ourselves for an apprehension of the problem before us. When we look out on the world around us, we see production, reproduction, growth, development, decay, and dissolution ever transpiring in every department of nature. As we pass downward in the scale of being, we descend from the wonderful processes of animal and vegetable life, through simpler forms, into chemical organization and mere mechanical and mineral arrangement of matter, and mere mechanical displays of force, until we are led back to the first constitution of things. The physicist assures us that all that we now see is the result of evolution, development, and progression. If so, it must have had a beginning. Let us then, as far as we can, divest ourselves of our conceptions of the universe as we now see it in its order and harmony of arrangement and organization, and endeavor to form some conception of the beginning, the first constitution of such a course of evolution and progression. When we have placed ourselves at this stand-point, let us trace the course of development claimed by the physicist, and endeavor to apprehend, as far as possible, all the details of the problem—all that has to be accounted for before the problem is solved.

At the very outset, before we can begin our investigation, or form a conception of the beginning of this course of evolution, we encounter this question of questions: What is the origin, the beginning of all things? It is a favorite maxim of the physicist, *Ex nihilo nihil fit*—"Out of nothing nothing comes," hence something must have existed forever, and been self-existent, independent, and self-sustaining. This axiom of the physicist we will implicitly accept. Then there are open to us but two alternatives. Either blind, irrational, insensate matter, and blind, irrational physical force, are eternal, self-existent, independent, and self-sustaining; or rational force, mind or spirit is eternal, self-existent, independent, and self-sustaining. The physicist takes the former alternative. He has mere chaos without law, order, property, constitution, co-ordination, adjustment, adaptation, or plan. We have an universe pervaded by chaotic matter and chaotic force. Whether this force would be attractive or repellant, latent or active, constructive or destructive, we know not. Again we have a grave problem in forming our first conception of this force. Is physical force self-active? Is there self-activity or spontaneity in physical force? We recognize spontaneity only in mind force. Again, as we look on matter, we recognize in it certain essential properties, so essential that we can not conceive of its existence without them. They are extension, form, density, impenetrability, rarity, malleability, ductility, elasticity, porosity, and inertia. If we place ourselves back of the first constitution of things, we can not conceive of matter as existing without them. Then we have to make these properties eternal, if we make matter eternal. If these properties, the primordial factors of the progression that the physicist claims, be eternal, then the progression that he claims they produce must be eternal. If eternal, it must become perfect in an eternity. But it is not perfect, hence it had a beginning, and the matter of which these properties are the essential properties, is not eternal, and had a beginning. But even if we concede the eternity of matter and these properties, we have but a turbulent chaos, a fortuitous clashing together of atoms, without order, system, or law. Then we can not conceive of the existence of matter without these essential forces—attraction, repulsion, adhesion, cohesion, heat, electricity, chemical action, and affinity, and crystallization. If we place ourselves back of the first constitution of matter, we can not conceive of it as existing without these forces. It matters not whether we regard these forces as different forces, or as different manifestations of one force, we can not conceive of matter as existing without them.

Even if we should attempt to hold in conception that nondescript, unthinkable something-nothing, matter without properties or force, as existing from eternity, we have only increased the difficulty. If "out of nothing, nothing comes," whence came these properties and these forces when they came into being? If latent in matter until progression began, whence came the impulse that commenced their activity? Here is another grave objection. If these properties were latent or inactive, then there is no spontaneity or self-activity in them. There is no inherent self-evolving activity in them, as the physicist claims. Then matter and force must have had a beginning. If not, how did they exist for an eternity without acting on each other? If they acted on each other in a progression during an eternity, they would have resulted in a perfect system. Then the eternity of matter and physical force, necessary as a basis for the progression claimed by the physicist, is an impossibility. Next we find in matter over sixty elementary substances, known as the original elements of matter. Whence came they? Were they eternal, or was homogeneous matter at some time changed into them? Whence came their number and their proportion to each other?

Then we have to account for the co-ordination, adjustment, and adaptation of these elementary substances and the forces we see in matter, and the essential properties of matter to each other. There have to be co-ordination, adaptation, and adjustment of all these to each other, and laws as to when they shall act, where they shall act, how they shall act, how long and how often they shall act, and in what order and in what succession they shall act. We know all this is adjusted in exact mathematical proportion, and in accordance with exact mathematical law. After all this assumption, and after we have passed over all these difficulties, we have only mineral and mechanical combination, such as would produce homogeneous masses, or mere mechanical mixtures.

As we proceed upward from this we encounter chemical action, chemical affinity, and chemical compounds arising from them. We meet with such questions as these: Were all these sixty elementary substances once in a chaotic mechanically mixed mass or masses? Or were they once, separate in homogeneous masses mechanically held together? If in the latter condition, how were they ever separated and chemically combined as they now are? If in the former condition, how came they to be combined as we find them now? Hydrogen has a greater affinity for chlorine than for oxygen. Yet we find chlorine is united with sodium, for which it has a less affinity than for hydrogen, and hydrogen is united with oxygen in water. Nitrogen has a far greater affinity for chlorine than for oxygen, yet we find nitrogen united with oxygen in the atmosphere, united mechanically, and chlorine with sodium. How came chlorine to select sodium with which it makes a useful compound, and nitrogen and hydrogen to select oxygen with which they make useful compounds, and chlorine to reject nitrogen and hydrogen with which it makes destructive compounds? Igneous rock composes the mass of what we know of the earth. Feldspar forms the principal element of igneous rock. It is composed of six elements. How came they to leave all the rest of the sixty elements, and unite in feldspar? No chemist, with the substances separate, can unite them and produce feldspar. Mica, another prominent element in igneous rock, has the six elements of feldspar, and four others. So has horneblende, another prominent element in igneous rock. No chemist, with the elements perfect and free, can produce these substances. Nor can he if he separate them from other substances in which they may be found. If they were once mechanically mixed in a chaotic mass, how came they to separate and unite in these substances?

Then whence came the principles and laws of chemical affinity? Some of these elementary substances will select some of the other elementary substances, and reject others. Again, they will unite in different proportions, and make different compounds. They will unite with two or three others, when they will not unite singly. Compounds will unite with other compounds, or with certain elements of other compounds, and form entirely different substances. Whence came this wonderful operation of chemical affinity? Then there are laws for the change of forms and characteristics by heat and chemical action. In all this, there is exact mathematical proportion and law. Simple substances will unite only in definite proportions. Different proportions give entirely different substances. Compound substances unite with certain simple substances, or with other compound substances, or with certain elements in them, in definite mathematical proportion. In this way, out of sixty elementary substances, are produced the almost infinite variety of compounds, differing from each other in an almost infinite number of particulars. Now the question arises, Were all this co-ordination, adjustment, adaptation and plan the result of the aimless, purposeless action of blind, irrational physical force on blind, irrational, insensate matter? Do we find in such a basis sufficient ground for all this? There are realized in this adjustment and adaptation and co-ordination in chemical action, some of the highest conceptions of mathematical law and proportion, and some of the highest ideas of pure reason. Has this a sufficient basis and ground in mere matter and physical force?

Then in the wonderful and beautiful process of crystallization, observed in all chemical action of solids, and most liquids, there is seen exact mathematical proportion and geometrical forms. Geometry, the most abstract and purely mental of all departments of science, the product of pure reason, has furnished us certain beautiful forms, and the laws of faces and angles. The geometrical department of the fine arts is one of the most purely ideal of all departments of science; yet in crystallization, we find all these ideas, laws and principles realized, as they never are in the utmost efforts of man. In so common a substance as the snow, and in so simple a formation as the snow-flake, there are to be seen sixty-four of the most beautiful combinations of geometrical forms, in crystals. In so simple, and so apparently crude a substance, as a mass of granite, we find three unique crystals, universally side by side, and symmetrically arranged. Are these highest conceptions of pure reason, thus so universally and so wonderfully realized in crystallization, through all nature, the product of blind, irrational physical force, operating on blind, irrational, insensate matter? And yet we are only on the threshold of our subject. If we look out on the universe, we see matter arranged in vast bodies—suns and planets—with exact geometrical forms, moving in orbits with exact geometrical forms. The masses of these bodies bear exact mathematical relation to each other, in each system. So also do their distances from each other, and their velocities in their orbits. So also these masses and distances and velocities have mutual mathematical relation. They are arranged in systems in accordance with these laws. Secondary planets revolve around the primary in accordance with mathematical law, and the primaries with the secondaries around the central sun; and the sun, with all his attendant orbs around him, sweeps majestically in an orbit of inconceivable magnitude and in an inconceivable period of time, around another center, and this relatively infinite system around another center, until the mind is lost in the conception! Our problem demands an adequate solution for the realization of these vast conceptions of pure reason in the constitution of the universe. These mathematical and geometrical ideas are the highest conceptions, the most abstract and ideal conceptions of pure reason. Is this complete realization of them, in the infinite universe, the result of blind, irrational physical force operating on blind, insensate matter? Gravitation, and all displays of force, operate throughout this boundless universe, co-ordinated, adjusted and adapted in accordance with exact mathematical laws, as to when, where, how long, and how often, and in what order and succession, and in what manner they act. Can the realization of these highest conceptions of pure reason, throughout the vast universe, be the result of blind matter and force? The vastness and the tremendous power of what we have been considering should impress all minds who investigate the problem, but there is still left that which is more intricate and mysterious, and that which requires even more effort of mind to investigate it, even if it be not so overpoweringly vast and sublime.

We have so far had only mineral organization and chemical compounds. The most mysterious and inexplicable elements of the problem have not, as yet, been even suggested. In the vegetable, we have organization, growth and reproduction, and something that originates, determines and controls this organization, growth and reproduction, and in accordance with a rational plan and system. Or, at least, all this phenomena can be interpreted and arranged in accordance with a rational system, or our science of botany would be an utter impossibility. That which originates, controls and determines, we call vegetable life, or vital force exhibited in vegetable life. Now, whence came it? It is not the force or one of the forces seen in chemical action or in inorganic nature, for they are destructive of this force seen in vegetable life. About sixteen of the sixty simple elements enter into the composition of plants. How came they to separate from the rest of the sixty, if once united with them in a chaotic mechanical mixture, and unite in vegetable forms? How came they to do this, when some of them have greater affinity for other elements than for any found in the vegetable compound? The chemist may take these elements and unite them with all his skill, and he can not produce the simplest vegetable organism, or a symptom of vegetable life. On the contrary, the action of mere physical forces, or chemical action, on these vegetable organisms, is to destroy them, and to decompose them. As soon as vegetable life leaves the plant, the operation of other forces destroys its organization and decomposes it. There is in the plant that which resists, which overcomes these destructive tendencies, and co-ordinates them with the growth of the plant, controls them, and makes them subordinate to that end. Whence comes this wonderful vital force, this wonderful principle or power of vegetable life? Did blind, irrational physical force evolve it out of blind, insensate matter, destitute of all such existence? Did matter and force, destitute of all vegetable life, evolve what is not in them, and what they destroy? Did blind, insensate matter, so modify blind, irrational physical force, both being destitute of vital force, as to change it into vital force? How could it, when they are not only destitute of vital force, but destructive of it? Did it exist forever latent and nascent in matter, or is it created by evolution? If it was forever latent in matter and force, how was it developed? What impulse started the evolution? How could it exist latent in that which is destructive of it, or be created by evolution out of what is destructive of it? And, above all, what is meant by this evolution that so wonderfully creates or develops this wonderful vital force? Is it not made a god by such an assumption?

All human experience declares that all vegetable organization and growth is from a vegetable cell or germ. No seed no plants, says all human experience. Then whence came the first seed or germ? How did the sixteen elements that are found in vegetables separate from the rest of the sixty, out of a chaotic mechanical mixture of these elements, or out of chemical compounds and unite in the vegetable germ, especially when they have a greater affinity for other elements than for any in the germ? Then how came they to take the exact proportions that are found in vegetable germs? No chemistry or manipulation by science can produce the combination from the elements, or the cellular organization or structure of the vegetable cell or germ. Nor, above all, can chemistry originate or evolve the life principle seen in the vegetable germ or growth. If it is the life principle that produces the cellular structure and growth, they can not produce or create that. If form and cellular structure produce vital force, they can not produce such form and structure. The problem then is, Whence the vital force or whence the cellular structure? or, perhaps more accurately, whence came both?

All vegetable matter is made up of cells. Whence the first cell? The germ is made up of cells. Was this germ in form and cellular structure evolved out of matter, destitute of either by blind force; destitute of and destructive of the force manifested in them and of such cellular structure or germ? But when we have the germ, whence came the wonderful co-ordination of matter and its properties and physical forces below vital force, to the growth and development of the germ? How came the force in the germ to control and co-ordinate matter and force destructive of the germ and its growth and antagonistic to vital force, and subordinate them to this growth and development? Then whence came the types and varieties of vegetable growth; the almost infinite varieties of form, reproduction and products? Whence came these results of these processes of reproduction and growth? Whence the almost infinite variety of co-ordination, adaptation and adjustments to the surroundings and to each other? It is thought that there are over three hundred thousand varieties differing from each other in almost every one of these particulars, in almost infinite diversity. Whence came they all, and their still more wonderful co-ordination and adaptation and adjustment to surroundings and to each other, and the co-ordination of surrounding nature to them? Let us take a single illustration. Certain plants, orchids of certain species, are fertilized only by certain insects. Certain insects, moths, perform for these plants this process necessary to reproduction. In the plant there are, Darwin says, traps, gins, pitfalls and spring guns, and snares, to allure the moth and compel it to do this work of carrying the pollen from one sex of the plant to the other. Whence came this co-ordination, contrivance and wonderful design? This is but a single specimen. Thousands, yea millions of such illustrations could be cited. Our problem demands Whence came all this? Is all this the product of blind, irrational matter, and blind, irrational physical force? Can these results, which require the highest efforts of master minds to apprehend them and construe them—these results so concurrent with and analogous to the highest conceptions of reason, be the result of mere blind irrational matter and force?

But there is a still more profound mystery. An infinitely higher step has to be taken. So far, we have but mechanical arrangement of matter, chemical action and vegetable life. Above and distinct from these, we encounter animal life, or a life force capable of instinct, sensation, locomotion, and voluntary motion, and, to a limited extent, understanding. Whence came this wonderful faculty or power, sensation? Was it eternally latent in matter? If it was, how was it developed? Can we say that chaotic matter, mechanical and mineral aggregations of matter, chemical compounds, or even vegetable combinations, have latent in them this wonderful property of sensation? It is the very caricature of all reason to say so. If not latent in them, whence came it? If not in them, it could not be evolved out of them. If not evolved, did blind insensate matter, and blind irrational force create what was not in them, and that of which they are destructive? No chemistry can detect or evolve this wonderful principle of animal life. No manipulation of matter and force can produce it. There are about sixteen substances that enter into animal organisms. How came they to separate from the rest of the sixty in mechanical mixtures or chemical compounds, and unite in the animal organization, especially since they have in many cases greater affinity with other substances not in the animal organization, than for any in it? How came sixteen to unite in vegetable organizations and sixteen in animal organizations? The chemist, with all his intelligence and skill, may unite these elements, and he can not produce one vegetable or animal cell or structure, or one symptom of vegetable or animal life. Vegetable life or organizations can not produce animal organization or life, nor be transmuted into them. Vegetable substances can be appropriated by animal organization and digested and assimilated, but animal life or organization can not be evolved out of vegetables, nor can vegetables be transmuted into animals, or made to take on or display one particle of animal life or structure.

All animal life is from an egg or germ. Whence came the egg? Experience declares it came from an organization precisely such as afterwards is evolved out of the germ. How came the sixteen elements in the animal to unite in the germ? Then each germ and all animal matter is made up of cells. Whence came the cells? Chemistry, with all its accumulations of the efforts of the intelligence of thousands of years, can not, with these elements, produce one cell, nor the germ in which the cellular structure appears. Dr. Bastian, with his experiments with the microscope, has demonstrated that vegetable and animal cells are radically different in structure, thus placing an impassable chasm between vegetable and animal life or organization, showing that one can not be evolved out of the other. Also, what will develop one of these cells, the means necessary to the development and growth of one, will destroy the other, thus showing the utter impossibility of developing one into the other. Then whence came the aggregation of these cells into the ovum? Whence came the first ovum? Then the wonderful growth, development, sustenance, and forms and processes of the animal frame. How are they evolved out of the gelatinous globule, the germ. Sensation, respiration, inspiration, secretion, excretion, absorption, digestion, circulation, and reproduction of the animal organism—whence came they? Then whence came all the families, species and varieties of animals, differing so wonderfully in form, means of life, growth, sustenance, reproduction, and every process of the animal organization? Whence came the adjustment of vegetable and animal life to each other, and the adjustment, adaptation, and co-ordination of each animal to physical nature and forces, and to vegetable life and surroundings? Are all these things that are co-ordinated and construed only by the highest effort of reason, and can be expressed properly only when co-ordinated by the highest conceptions of reason, and which show perfectly realized the highest ideas and conceptions of reason, the result of the aimless, purposeless ongoings of blind, irrational force and blind, insensate matter?

Then that wonderful attribute of animal life, known as instinct, which so often displays memory, reflection, comparison and understanding, almost rivaling human reason, whence came it? Was it eternally latent in physical force and matter? Can we believe that chaotic matter, mineral or mechanical aggregations of matter, or chemical compounds, or even vegetable life, ever contained, or now contain, the wonderful instinct of the dog or horse? If latent in them, what developed it? If not latent, how could it be evolved out of them, out of what did not contain it? The displays of instinct are so often manifestations of calculations for, prevision of, and provision for results, not capable of being conceived of, and of being held in mere instinct. The cuckoo lays eggs in other birds' nests, and makes them rear her young. The bee builds a cell which displays perfect architectural skill and geometrical knowledge in economy of space and securing strength. The intelligence is not in the bee. Is it not back of the bee, implanting the instinct as an impulse working out so wonderful an intellectual result? Certain ants make workers and slaves of others. The working bee kills the drones. The queen bee kills her daughters. Whence come these wonderful instincts which secure results and display conceptions of reason far above the instinct of the animal? Did blind, irrational force evolve the instinct that secures these intellectual conceptions so far above itself?

To state the problem in full, we would have to insert all we know of astronomy, chemistry, mechanics, botany, zoology, and all the sciences, and in each department of them, and we have as yet but a glimpse of the infinity of nature. Take a single vegetable, and learn all that can be learned of its growth, sustenance, organization, processes, and reproduction. Then think of the hundreds of thousands of varieties of vegetables, differing from each other in neariy all these particulars. Then take an animal organization, man's physical organization, for instance. Study the wonderful processes of production, growth, sustenance, and reproduction of the physical man. Learn all you can of the wonders of circulation, secretion, excretion, respiration, absorption, digestion, and reproduction of the physical man. Take the wonderful and mysterious process of reproduction that man has been studying for thousands of years. Read the countless volumes that have been written on this one process, and the innumerable wonders revealed in them, and reflect that they touch but the outskirts of the subject, and that the real, the essential, is still shrouded in profound mystery. Trace this amazing process through all its wonderful and beautiful manifestations, and reflect that this is but a glimpse of one of the processes of our physical frame. Multiply all this by the number of processes, and then grasp, if you can, the infinite, the unfathomable adaptations, adjustments and design seen in man's organization alone. Then reflect that there are hundreds of thousands of animal organizations, differing from each other in nearly all of these particulars in a most wonderful manner. Then reflect on the adaptation, adjustment and co-ordination of these almost countless varieties of animals and plants to each other and to surroundings, and you begin to apprehend—and you can only apprehend—a glimpse—and it is only a glimpse—of the demands of the problem. Then take the adaptation of organs and functions to ends. Take the hand of man, with its four hundred thousand adaptations, as exhibited in the large volume of one of our greatest anatomists. Reflect that it is but one organ of a multitude in the human frame. Then take all the organs of the human frame. Then all the organs and functions of all animals, differing so widely from each other. Then take the adaptation of analogous organs and functions to widely different circumstances and uses, as the hand of man, the wing of a bird, the paddle of a whale, and the flipper of a mole. Take also the accomplishment of the same ends or purposes by so widely different organs and functions in countless other cases. When you have all these before you, then ask whence came all this? Are these results that can only be apprehended by the highest efforts of our mind, and can be construed only by the highest conceptions of our reason, the result, the aimless, purposeless working, of blind, irrational force and blind, insensate matter?

Geology tells us that there have been ages or epochs in the earth's history, during which no life or types of life existed. Then, as the earth became fitted for them, lower forms of life appeared. As the earth became unfitted for these, and fitted for higher types of life, the lower degenerated and disappeared, and higher types took their places. It teaches, however, that each species appeared and existed in its greatest perfection when we first meet with it. It teaches also that very highly organized types of life, wonderful organizations suddenly appeared without any typical progenitors. It teaches that, so far from a change of conditions developing any species into another, the change of conditions caused each species to degenerate until it became extinct, and they were succeeded by higher and radically distinct types, in their highest perfection at the commencement of their history. Our problem demands, Whence came these types that thus suddenly appear in their greatest perfection at first? Especially, whence came these wonderful and highly organized forms of life that suddenly appeared without any typical progenitors? If we concede a course of evolution, a process of development, it does not solve the problem. Indeed, we are just as far from the solution as we were before the hypothesis. It merely tells us how the phenomena have been produced, in what manner they have occurred; but it does not give the slightest hint as to the cause of the phenomena. The questions stand just as they did before the hypothesis. Whence came matter and force? Whence came the essential properties of matter, and the essential forces of matter, or the essential manifestations of force in matter? Whence came the co-ordination, adjustment and adaptations of these properties and forces? Whence came the adjustments and adaptations seen in the heavenly bodies and systems? Whence came vegetable cells, germs, forms, life, growth, and reproduction? How came these elements to be organized into a seed or germ? Then, whence came the growth and wonderful reproduction, the species and varieties? All animal life is from an egg or germ. Whence came animal cells and their organization into the germ? Nature does not produce the germ now, except through a pre-existent organization, such as is developed out of the germ. Did she ever do so? If so, what proof have we of it? How does any one know or prove it? How could she do it? How could it produce out of lower forms of existence that which they destroy?

If all life was in a primordial germ, then all possibilities of life were there, or whence came these varieties of existence? Whence came the differentiation, selection, and difference of development? If conditions make the difference, then each cell must have contained in itself all conditions or adaptation to all conditions. If different conditions existed in different cells, or different conditions existed around different cells, and adaptability to all conditions in each cell, whence came they? If different life and different conditions existed in different cells, or different conditions surrounded different cells containing different life, whence came they, and the concurrence of suitable conditions with appropriate life? If the same life and conditions existed in each cell, or the same life existed in each cell, and different conditions surrounded different cells, where came the difference in development, or the wonderful adaptation of this one life to different conditions? All life and all conditions, then, must exist in each cell, or all life and power of adaptation to all conditions must be in each cell. We, then, make a fetich, a god of this gelatinous globule, the germ or the cells of which it is composed. Not only this, but we have to suppose a wonderful co-ordination of conditions and adaptation in the same place and at the same time, so as to evolve out of what has no sex two beings of opposite sexes. Then all along the course of development we have to suppose the evolution, at the same time and place, of two beings of opposite sexes, each having the same improvement, out of what did not possess it, and that their offspring associate sexually only with each other. All along the chain of evolution, in almost innumerable cases, we have to assume that existences produce other existences that contain what they did not contain.

In this manner, we have to interpolate in our series of material forces and matter, their adjustment, chemical action, crystallization, vegetable cells, germs, life, growth, reproduction, varieties, and species, animal cells, germs, life, growth, reproduction, sensation, instinct, and species and varieties. New agencies are continually appearing out of what does not even suggest them, and out of what it is a mockery of reason to assume contains them, order, affinity, life, plants, sensation, and instinct. Then we see incipient organs that are a burden in certain species for a long time, become after a time highly useful in higher species. Silent members, that after awhile become completed, and become highly useful, are met with in this course of development as an inexplicable problem. Then there appear all along the course of development wonderful adaptations to emergencies of heat, cold, water and drouth, and other surroundings, as seen in the stomach of the camel, the water receptacle of plants, etc. Also, wonderful adjustments of organs and functions to ends, as seen in the neck of the giraffe, the proboscis of the elephant, and the electric organs of fishes, the illuminating organs of insects, and the mammary glands of mammalia. We see the laws of nature overcome in nature by the application of other forces by means of mechanical contrivances just as in man's labors and arts. The tubular bridge has the greatest strength of material compatible with the greatest lightness of structure that can be secured. The frames of birds are constructed on the same principle. The wing of a bird is a wonderful machine for overcoming gravity and securing motion through the air of a body far heavier than the element on which it floats, or through which it so easily moves. It took man thousands of years of hard study to attain to a knowledge of electricity and the battery. In the electric organs of certain fishes, we find displayed a perfect knowledge of battery, coil, pile, and medium through which electricity will act on the organization of other animals.

There is another department of nature, another class of ideas, of the highest and most purely ideal character realized in nature. They are the conceptions or controlling ideas of order, beauty, harmony, and sublimity. In crystallization, as we have said, we have wonderful displays of order, symmetry, and beauty. In vegetable life and forms, these ideas have been controlling ideas in nearly every variety of existence. In a large portion of vegetable nature, beauty seems to have been the sole idea. Such is the case with the almost countless varieties of flowers, leaves and forms of vegetable life with which nature is rendered so resplendently beautiful. A vast majority of plants seem to have been varied from others merely to express different forms and ideas of beauty. The same holds true of animal forms and colors. Think of the almost infinite varieties of colors and blendings of hues to express beauty in animals and plants, and in the clouds, and even mineral products of nature. Of the humming-bird alone there are over two hundred varieties, all expressing peculiar, unique, and surpassing forms of beauty. Of the rose, there are over six thousand varieties, expressing different ideas and conceptions of beauty. Then, also, the realization of the purest and highest conceptions of beauty, harmony, and sublimity, seen in all nature, is to be accounted for in the solution of our problem. Did blind, irrational force and blind, insensate matter, in their aimless, purposeless ongoings, evolve these highest conceptions and ideals of pure reason? What have they to do with the beautiful, the sublime, the ideal.

There has been also correlation of growth. Change in any organ or function of any animal is correlated by change in other organs so as to secure symmetry in the animal, and adaptation of all organs to each other. Symmetry of sides is secured, and there is also a correlation of surrounding nature to such growth and development of animals and plants, and also of animals and plants to each other, and growth and development in each other. There has been an order of creation—in time, in method, in system, in development. This has existed in all epochs of the world's history. By a comparison of fossil types of life, and those now existing, man has reached the idea that there has been developed in creation controlling ideas, and these controlling ideas have been ideal concepts, archetypal forms, with variations from them. These ideas, the highest conceptions and achievements of zoological science, and by which its classifications are made, and without which it could not be a science, are realized in nature in this course of development. Is this realization of the highest conceptions of reason, in the course of development, observed in nature, and the results in which they are realized, the product of blind, irrational force and blind, insensate matter?

Perhaps the reader is already bewildered, and almost overpowered with the vastness and mystery of the problem, and yet we have not reached the most wonderful and incomprehensible part. We have in man rational life, a life principle capable of reason and moral action. In man we have spontaneity, spontaneous volition, and action, power to arouse the mind to act, power of memory, reflection, and abstraction. We can think of our thoughts and reason concerning our reasonings. Whence came this wonderful power? Whence came self-consciousness and thoughts of infinity, causation, and right and wrong, and moral desert? Whence came rational ideas of space, time, causation, and infinity, and abstract ideas of numbers and forms, as in arithmetic and geometry, and the wonderful development of mathematics as seen in its higher and abstract departments? Whence came the artistic capacity and feeling in music, painting, and sculpture? The masterpieces of painting and sculpture, whence came the power that produced them? The productions of Beethoven, Mozart, Mendelssohn, and Handel and Haydn? The masterpieces of architecture? Whence came they all? Whence came instrumental and vocal music? Whence came the power of the human voice in speech and singing? A Solon, a Solomon, a Daniel, a Plato, a Milton, a Shakespeare, a Bacon, or a Newton, with all their wonderful powers of mind and soul, whence came they? Study their works. Reflect on the vast knowledge, the profound thought, the almost divine power of reason, the marvelous power of descriptive eloquence and imagination exhibited in them. Contemplate the amazing display of rational and moral force seen in such lives! Weigh well the aspirations, doubts, hopes, speculations, reasonings, and discoveries of such a soul! Consider well its amazing powers of apprehension, reason, comprehension, sorrow, joy, and despair! Think of its incalculable obligations and responsibilities of good and evil! Then ask, whence came all this wonderful power, this wonderful form of life so divine?

Look out on man's history as a race—his achievements in science and art. Survey his cities, his temples, his buildings and structures of all kinds; his empires and civilizations; his discoveries. Survey his inventions in the arts. Peruse his masterpieces in the field of thought. Consider his achievements in moral life as seen in a Confucius, a Gautema, a Zoroaster, an Abraham, a Moses, a Socrates, a Paul, a Howard or a Washington, a Luther or a Wesley. Then ask, Whence came these wonderful minds, these godlike souls? Their achievements are the work of what? Of blind, irrational physical force, so modified by the organization of blind, insensate matter as to be capable of such divine results? Believe it who can! Is it not the very travesty of reason, the very mockery of common sense, to suggest such a thought? If it be claimed that it is the same force seen in insensate matter, modified by that organization of matter known as our bodies, where comes that wonderful organization of matter that produces so stupendous a result? Could matter develop itself into such an organization? Could such an organization be the result of the action and interaction of blind, irrational matter and force on each other? Is the mind nascent or latent in minerals and earths waiting for development? If not, whence does it come when it first appears? Whence came the organization and means of developing it? Then who, for one moment, can believe that the achievements and mental and moral actions of a Socrates, a Solomon, or a Paul, are the result of the same force as burns in the brand or whirls the dust? If it is merely the same force seen in insensate matter, modified by the organization of matter. how comes this force to be so wonderfully modified? Could this wonderful development of the force seen in matter that is displayed in mind and reason, and that wonderful organization, our bodies, have resulted from the action, reaction, and interaction of blind irrational matter and force? Could such development of matter and force have originated in any other way than in the origination, control, and direction of a pre-existing mind acting on a plan with this wonderful development before it as an end? When we ask the physicist whence came this wonderful modification of force, he replies that it is occasioned by that wonderful organization of matter, the body. When we ask, whence came such a wonderful organization of matter, he replies, it is the result of the action on matter of that marvelous force, the mind. Thus he makes both matter and force cause and effect, and reasons in a circle. Not only so, but he has to assign to force intelligence, to secure such results, or he makes matter and force evolve what is not in them, and violates every principle of reason by making the effect infinitely greater, and entirely different from the cause.

We have, then, either to assume the eternity of mind latent and nascent in matter, or make matter and force evolve what is not in them. Not only so, but how could there, in either case, be this wonderful development, without mind back of it, to originate it, and adjust matter and force, and to control the course of development? Such are some of the demands of the problem for which the physicist offers his speculations as a solution. If we concede his theory of development, evolution and progress, still the question stands unsolved, Whence came the wonderful force that raises the animal or plant from inorganic matter? Or higher forms from lower? Whence came sensation, instinct and reason? Were they in star-dust, chaotic matter, nebulous masses? Or were they added? If you say conditions produced them, what is that but a phrase to conceal ignorance, for conditions may modify, but they create nothing? What power is adequate to all this? What power or force do the elements of the problem demand, as an adequate ground or basis? Whence came the universal, catholic ideas of God, and creation and government by him, of morality, moral desert, responsibility, retribution, providence, prayer, revelation, miracle, sacrifice, mediation, atonement, incarnation, religion and worship? Are they not the answer of reason and man's rational religious nature to this question? And our problem demands, whence came these ideas? They are one of the most difficult features of the problem. Whence came these universal ideas, that man alone has, and what power evolved them? There is an all-pervading plan or system in nature, including every atom, every organ, every function, every plant, every animal, every species, every genus, each planet, each system, and finally the Cosmos. Reason passes upward through order, life, sensation, instinct, understanding, reason and moral qualities and power, to mind, law, right, and holiness. Reason insists on including all these elements in the problem, and on using them as the chief means of solving it.

Reason insists on asking these questions and including them in the problem. Of what is each existence made? In what manner made? In what form? By what or whom made? For what end? We can not investigate or describe a single process in nature, without asking all these questions, and including all these ideas. We use teleological ideas and language in investigating and describing every existence and process in nature. We use terms implying the existence and action of mind. The physicist does this himself, even when arguing against them. Such are the characteristics of the process of nature, that we can not adequately describe them otherwise. Another query that arises is, What does nature do now? It makes out of crude material new mixtures and compounds, but not new plants or animals. They come alone through an existing organization. Man makes watches and telescopes, but these do not make other watches and telescopes. Nature takes the same materials and makes a crude mixture we call *slag*. Nature does not make inorganization do the work of organization, unintelligence do the work of intelligence. Then the query arises, How can we account for what nature does not now, in a single instance, do? Can we ascribe to nature what she does not now do, and what we have not a shadow of evidence that she ever did?

Then we are conscious of spontaneity in ourselves, spontaneous action, thought and volition. We can arouse processes within, just as what acts through the senses arouses processes of thought. What is this spontaneous, self-acting agent that arouses within us processes of thought and emotion? What is it that takes cognizance of these processes, these acts of itself? If that which acts through the senses, and arouses these processes, be a real substantive agent, is not that which acts within and produces the same results also a real substantive agent? This is another profound query in the problem that is overlooked or ignored by the physicist. Then we have nothing at one extreme of our path of investigation, and man and his highest achievements and powers at the other. In the first constitution of matter and force, we have the highest ideas of reason realized. In the co-ordination of matter and force, in chemical action, in crystallization, in vegetable life, in animal life, in rational life and its achievements, in the all-pervading plan and unity of the universe, are realized the highest conceptions of reason. The course of development is one along which we can travel only by means of these ideas, and because they are realized in it. Then the question is, Whence came all this? Such is a mere glance at the problem, and the requirements of an adequate solution. We can give but a hint of the various fields of thought to be traversed in endeavoring to grasp the demands of the problem. The world and its countless existences, and their countless processes, the universe and its vast worlds and systems, are the elements of the problem. The question is, How came they into being? Would not we be justified in stopping and affirming, "In the beginning Jehovah created the heavens and the earth"?

CHAPTER II.

POSTULATA AND DATA.—OUR MEANS OF SOLVING THE PROBLEM.

IN the previous chapter we endeavered to place before the reader the requirements of the problem, and to give him some conception of its infinite extent. The next question is, What means have we of solving the problem? The agent on which we shall rely to do the work before us shall be the human mind; and in that term we include man's entire rational, moral, and religious nature. Our first postulate then is, that man's entire mental nature, his rational, moral, and religious nature, shall be accepted, and no part ignored, discarded or denied. If we employ but a part of our instrument or agent, we can have but a partial result. If we reject or deny a part of our agent's powers or means of solution, we reject a part of our means of solving the problem, and a part of our agent's solution. Our second postulate shall be the integrity and reliability of our nature, our whole nature, its each and every part, rational, moral and religious, and the reliability of its intuitions, its universal decisions, its catholic ideas, in each and every part, rational, moral and religious. Correction of errors by a higher use of reason, will be accepted of course, but the error must be established by a higher use of reason, and not by discarding reason; and that which is substituted instead must be established by a higher use of reason, and not by a denial of reason. Our third postulate is the paramount authority of our catholic ideas and intuitions in investigating the problem and in solving it. If our nature—our whole nature—rational, moral and religious, be not reliable, and its deductions and decisions valid, all reasoning is at an end, even reasoning to convict our nature of unreliability. We can not set to one side a part of our nature as unreliable, and pretend to accept human nature as our guide and standard. Our moral and religious nature must be accepted and trusted as implicitly as our rational nature, or what is called our rational nature, for we confess our inability to separate one from the others.

Our fourth postulate is that our investigation shall be conducted in strict conformity to the methods of inductive philosophy, and our solution reached by exact obedience to its laws. We must first learn what the phenomena really are, how they actually transpire; inquiring without prejudice or preconceived opinions what are the facts. We must also observe carefully what are the characteristics of the phenomena, for they are our principal, and often our sole means of determining the cause. Concerning each phenomenon and existence we must ask: Of what made, or the material cause? In what manner made, or the modal cause? In what form made on the formal cause? Then, by what, or whom made, or the efficient cause? And, finally, for what purpose, or the final cause? Concerning phenomena, we inquire, Did they really transpire? when? in what manner? in what order? in what connection? What are the characteristics and nature? What produced them? For what end or purpose were they produced? As our deductions concerning the efficient cause of each existence and phenomenon, and especially concerning the nature and character of the efficient cause of each existence and phenomenon, and our deductions concerning the design or final cause, must be largely deductions of reason based on the characteristics of the existences and phenomena, we must have clear conceptions of the principles that should control reason in this work, and of what decisions of our nature must be accepted and what can be questioned. We must have clear conceptions of the regulative principles and ideas of reason that can not be questioned, and of those catholic ideas and decisions that can not be denied without denying reason itself. As the physicist denies all the catholic ideas and intuitions of our nature that conflict with his predetermined conclusions, we are under the necessity of stating them at some length, reaffirming and re-establishing them. We may be under the necessity also of repeating them in different parts of the book in order to completeness of our argument. But if, by reiteration, we can emphasize them and impress them on the mind of the reader, we shall accomplish what we desire above all other things.

The sources from which we obtain knowledge are: 1. Consciousness. 2. Sensation. 3. Intuition. We shall implicitly rely on these sources of knowledge and accept their affirmations when correctly expressed, properly limited and stripped of error. We shall insist also, on the agreement and harmony of all of these sources of knowledge in their affirmations if correctly interpreted. Neither one can say to the other, "I have no need of thee." Each is dependent on the others for fundamental ideas it uses in its work, for regulative principles and aid in perfecting its work. No system of truth can be based on consciousness, or sensation, or intuition alone. There is in the mind inherent faculty or power, and the mind has regulative principles controlling its action. When the senses appealing to the mind furnish the occasion, the mind has not only the contents of sensation, but also original convictions of reason above the contents of sensation. These are self-evident truths, and are fundamental ideas, and regulative principles. The tests of intuition are:

I. They express the relation of things; the underlying principle, the central idea of things.

II. They are self-evident.

III. They are necessarily true, and can not, in the nature and relation of things be otherwise than as they are, and true.

IV. They are catholic or universal ideas, or all men have them from a proper exercise of the faculties of their reason.

In appealing to the intuitions in our reasoning we must decide: I. Are they intuitions? Do they express general principles? Are they self-evident? Are they catholic in their nature? II. Are they correctly expressed? If these queries are answered in the affirmative they must be implicitly accepted or all reasoning is at an end. To reason at all, we must accept the reliability and veracity of our nature in its intuitions, and its integrity in all its parts, rational, moral and religious. If our nature in its intuitions, be false and unreliable in any part, moral, rational or religious, there can be no basis for reasoning; no means of reasoning, no test of reasoning, no regulating reasoning, and no reasoning in any sense. This should be borne in mind, in examining the speculations of the physicist, when he rejects the intuitions of our rational, moral and religious nature, as delusive imaginings or metaphysical speculations.

We are now ready for the fundamental primal intuitions of our nature, on which we must base our solution of the problem stated in Chapter I, and by means of which we must solve the problem, and by which we must test our solution. What, then, are the postulata and data of reason? what are the characteristics of the phenomena, the nature of the phenomena, the elements we must use in solving the problem? These must be fully and clearly stated and established, or we can not reach an adequate solution of the problem. As fundamental primal intuitions of our nature, and back of which we can not go, and which can not be questioned, we postulate: There is a Me, and there is a Not-Me. There is a Perceiving Self, and a Perceived-by-Self. These are distinct and different, and can not be confounded in our thinking, or the existence and reality of either questioned in our reasoning. There is body or matter, and there is mind or spirit. Body or matter has objective and independent being—that is, it is not dependent on observation for being; and it has external and extended reality; and there is in body or matter potency affecting self, and causing it to be perceived by mind or self. We cognize or intuit in body or matter extension, divisibility, size, density, porosity, figure, impenetrability, mobility, inertia and situation. We cognize or intuit force as affecting matter, and force in bodies affecting other bodies. We intuit, by consciousness, an existing, independent, abiding, potential self, as different from matter in which it resides, or our bodies, and as distinct from the organs which it uses, and which reveal matter and themselves and our bodies to the mind or self. We intuitively know and feel that the knowing mind is different and distinct from our bodies known by it, and in which it resides, and which it uses, or matter known by it, or the organs or functions of our bodies it uses, and which reveal matter and our bodies and themselves to the knowing mind. The faculties of the mind are consciousness and thinking, moral, responsible, personal attributes.

We intuitively know and feel that matter has not these attributes, but that it has other properties that reveal it to the mind that has these attributes. We intuitively recognize that force belongs to body or matter, and faculty to mind. We intuitively know also that the force that we see in matter, the force that we control and use by our minds, the force that we cognize operating in our bodies, often independent of, and in opposition to our mind, or in obedience to it, is not our mind, nor the same force as our mind. We intuitively recognize a difference between physical force, seen in insensate matter—vital force, sensation, and rational or mental force or power. We can not resolve mind into matter or matter into mind, or physical force into mind or mind into mere physical force, modified by organization, no matter what our theories may be. We intuitively make the distinction, even while denying it and attempting to disprove it. These fundamental distinctions must be borne in mind in all our investigations and reasonings. We have also these necessary beliefs, space, infinite space, time infinite duration or eternity; also mathematical axioms and postulates, and the regulative principles of every department of science; also the primal and necessary belief of cause and effect. As this intuition, and the reasoning inseparably connected with and flowing from it, is the basis of all theistic arguments, the physicist has attempted to get rid of the argument by denying the intuition and falsifying our nature. There is no such thing as cause and effect. It is merely a generalized statement of invariable sequence, that things occur in an invariable order or succession. There is no potency in the cause to bring the effect out of non-being into being. It is merely time-succession.

The intuition of cause and effect is more than a recognition of invariable association and succession. We recognize no relation of cause and effect in the invariable association of day and night, but we do in the conjunction of moon and tide. We might see one train of cars follow another for thousands of years, or forever, and never dream of uniting them in the relation of cause and effect; but the first time we see the locomotive and train, we instantly recognize the first as the cause of the motion of the second. We recognize a potency in the locomotive to cause the motion of the train. Then when the mind recognizes this relation of cause and effect, there is more than invariable association or succession. The mind recognizes in the properties or forces of one,power or potency that brings the other out of non-being into being. We may gaze on invariable succession forever, and never think of cause and effect, for we do not recognize a potency in one to bring the other into being. This intuition is not the result of abstraction or a generalized conclusion, for man acts on it before he can generalize or abstract. It is one of the first conceptions of the mind. Right here we lay down another postulate, the basis of all proper reasoning on this subject. Whence came the first cognition of this relation of cause and effect? What caused the mind to evolve this intuition? The germinal idea and basis of all ideas and reasoning on this subject, we affirm to be the consciousness of man, that he is one indivisible, conscious, thinking, willing, planning, responsible, free, moral self. He is conscious that there is, in himself, potency or power, controlling matter and force, and using them for certain ends. His idea, then, of power, force, and causation arises in consciousness of an energizing will, which is power in action, controlling second causes, our powers to produce an effect, our conduct. Almost the first intuition the child displays, is this intuition of personal, responsible causation. Hence he recognizes causation wherever he observes a phenomenon, and makes the cause a personal, responsible cause. He assigns personality and responsibility to every object around him. Then physical science obtains this regulative idea of causation from mental phenomena and intuition. So also it obtains its conception of force and power which it uses in its investigations, and in construing the phenomena of the physical world. The ideas of law, order, and system are obtained also from the moral and mental world. They arise from consciousness of duty, obligation, plan, method, and system in our conduct and actions, and mental and moral life.

Man is conscious, also, that his mind is an intelligent cause, producing order, arrangement, adaptation, adjustment, co-ordination, design, contrivance, plan, method, and system, with prevision of, and provision for desired ends. He intuitively reasons and knows that co-ordination, order, adaptation, and adjustment, necessarily imply design, contrivance, plan, method, and system, and that design, contrivance, plan, method, and system necessarily imply an intelligence; the efficient cause of this design, plan, and system, and that they can be produced by intelligence alone. It is an intuition, as palpable as consciousness, that there is causation in the universe; that there is potency in certain things to bring others into being. It is an intuition as palpable as consciousness, that co-ordination, adaptation, adjustment, design, plan, law, order, and method, imply intelligent causation. It is a truth as palpable as existence, that there is co-ordination, adjustment, arrangement, adaptation, design, plan, law, method, and system in nature. If a man denies this, he is not capable of being reasoned with, nor worthy of one moment's further notice, for he has bid adieu to all common sense. In reasoning on causation in nature, we inquire; 1. What are the phenomena—what has transpired? 2. Time of the phenomena, or when it occurred—how often it occurred—how long it was transpiring, and in what order of succession it occurred? 3. In what manner, or how transpired? 4. What are the characteristics of the phenomena? 5. What produces the phenomena, or what is the efficient cause? 6. For what end or purpose were the phenomena produced? The first four queries are prosecuted chiefly as a means of determining the last two, and serviceable as they aid in this. The real object of science is to determine the efficient cause, and the final cause or purpose of things. What claims to be science, *par excellence*, at the present time, would reject as irrational and futile all inquiry concerning the efficient cause, and the final cause of phenomena. But in so doing it attempts to discard one of the most persistent and universal tendencies of human thought. Man invariably inquires when he observes a phenomenon, What, or who caused it, and for what purpose was it caused? All other inquiries, such as the physicist would permit us to make, are merely prosecuted as a means to determine the efficient and the final causes. They are valuable only as they throw light on them.

We are not precluded from inquiring into the efficient cause and the final cause, when we know the characteristics of the phenomena, and how they transpired, and have classified them into bundles, and have labeled them after the manner of what is now called science. On the contrary, these are but steps to the real end of scientific investigation, the efficient cause, and the final cause. Nor would we be precluded from inquiring into the final cause, even if we knew the efficient cause. The mind persistently and intuitively inquires after final cause, or for what purpose a thing was done. The watch, the mind persistently declares, must have had a final cause or purpose, and it is never satisfied until it learns it. So it declares the eye must have had a final cause or purpose, and whether the physicist will or not, it will prosecute this query as persistently as it will reason at all. The inquiry into efficient cause always leads to intelligent cause, and the inquiry into final cause as clearly establishes an intelligent cause as the eye and its use in sight establishes the existence of the sun, and that it is the source of light. Hence, the physicist would cut off all such inquiry. But he can not avoid intelligent causation in that way, any more than he can avoid light by exhorting men to put out their eyes, for they will not do his bidding and deprive themselves of sight. Nor will they do his bidding, and cease to inquire into the final cause of things as determining the character of the efficient cause. Nor will they do still greater violence to their common sense, and cease to inquire after the efficient cause of phenomena.

Then one of the fundamental postulates of all reasoning in solving our problem is the idea of causation. There is causation in the universe. Every effect must have had an adequate cause. An effect implying intelligence must have had an intelligent cause. Co-ordination, adjustment, plan, law, and system must have had their origin in intelligence as their efficient cause. The object of all scientific research is to determine the efficient and the final cause of phenomena. Such is the object of our present inquiry. When we have determined this, we have solved our problem. Another fundamental idea: In all our reasoning we pass from a knowledge of the finite to an apprehension of the infinite; to a knowledge that the infinite exists, and to an apprehension of some of its characteristics. From a knowledge of finite portions of space, we pass through a relative infinity of finite portions of space to an apprehension of absolute infinite space, and know that space must be absolutely infinite. From knowledge of finite duration we pass through relatively infinite duration to absolute duration or eternity. From a relative infinity of microcosms we rise to an apprehension of the macrocosm or universe. From a relative infinity of finite causes, systematically correlated as a whole or a system, we rise to an apprehension of that which includes all causation—the absolute cause—the uncaused. From a relative infinity of conditions, co-ordinated and correlated as a whole, we rise to an apprehension of that which includes all conditions, and is unconditioned. From a relative infinity of the contingent, we rise to an apprehension of the necessary and absolute. From a relative infinity of finite beings, we rise to an apprehension of absolute being. From relative infinite displays of forces, we rise to an apprehension of infinite force or omnipotence. From a relative infinity of displays of intelligence, we rise to an apprehension of infinite intelligence.

Now, if our nature be reliable and a valid basis for reasoning, and a trustworthy means of reasoning, these catholic and universal apprehensions must be valid and true. The objective reality corresponds with the subjective notion. The physicist accepts the verity of our apprehensions of infinite space, infinite duration, and assumes the absolute and unconditioned in matter and force, assuming, as he does, that they are eternal, uncaused, and absolute. We insist that we should accept the equally universal apprehension of infinite intelligence, infinite causation, infinite intelligent causation. We have precisely the same ground for accepting the latter apprehension, that he has for accepting the former apprehensions. There is a gross inconsistency in his course that shows that the wish is father to the thought, and that not reason, but passion and prejudice, control him in his course. We must not confound apprehension with comprehension—a knowledge that a thing exists with a perfect knowledge of it. As all admit, we can apprehend infinite space and duration, so we can apprehend infinite intelligence. We wish now to call particular attention to the following data that we have and must use in solving the problem. We see around us properties, attributes, and qualities—the attributes of subject. We can compare these, and classify them, and generalize them, and learn thus the nature of subject. We see protension, movement, and succession, events transpiring in time, and having a beginning, necessary order and arrangement, expressive of power, and regulated power, which throws these characteristics back on the power that produced them, on that which regulates the power, and produces order, arrangement, system, plan, and law. We see that all things have a relation to each other, a relation to the whole, and a comprehensive unity, which suggests system, method, plan, and law. We see things conditioned in time and space, which suggests the unconditioned as the necessary antithesis and ground of the conditioned. We see, in every part of the universe, things which have a necessary relation to reason and thought. Numeral and geometrical relation and proportion, in the definite proportion of the primitive elements, in the primordial constitution of things, and in chemical combination—symmetrical relation and arrangement of parts in crystallization, and of parts and organs in all organized beings—the numerical and geometrical relation and proportion of the forces and motions, masses and distances, and orbits of the planets and other heavenly bodies and systems, all of which are in exact mathematical relation and proportion. This science—mathematics—is the highest achievement of pure reason and of abstract thought, and its very highest ideas are realized in

the universe, from each molecule in it up to the infinite universe.

The arrangement, co-ordination, and adjustment of all forces and powers in nature, is also in accordance with exact mathematical law, another realization of one of the highest conceptions of reason. Then these forces are co-ordinated, adjusted, and adapted to each other and the whole of nature. There is a regular and uniform succession of new existences. All this necessarily implies design, plan, method, system, and law. There has been, from the commencement of organic existence, an evolution of new species conformable to fixed and definite ideal archetypes, which necessarily implies a comprehensive plan and law, system and method, and co-ordination, adjustment, and adaptation. All these have their necessary ground in reason and thought. There is, all through organic nature, the adjustment and adaptation of organs to special functions. Diversified homologous organs, which are made to fulfill analogous functions, and the same organs made to fulfill various functions, yet maintaining a general plan, necessarily implies knowledge, alternativity and choice. All these have their necessary and only conceivable ground in reason and thought. All these, also, show prevision of, and provision for, coming existences. So does the progressive unfolding of species in accordance with ideal archetypal forms. So does the provision for coming existences revealed by geology. So also does the course of evolution claimed by the physicist. All this has its only conceivable ground in reason and thought.

We have in the universe also these facts, which have their necessary ground in reason and thought, since they have a necessary relation to moral ideas and ends. There is a universal tendency to discriminate between acts as voluntary and involuntary, and to attach accountability and responsibility to the former, and regard them as either right or wrong. All this indicates a relation to an immutable standard of right. The universal sense of dependence, obligation and duty indicates relation to superior power, to absolute authority. The universal consciousness of accountability and responsibility, and

the universal conviction that we endure the consequences of our actions, as a reward or punishment, indicates a relation to a Supreme Judge. The happiness that we see resulting from good conduct, and the misery we see resulting from evil conduct, here in this life, and the universal anticipation of a future life, in which it will be the same, indicates a relation to a Supreme Judge and Executive.

As the physicist professes to take reason as his means of solving the problem and his standard, these universal and catholic ideas of reason, and the highest ideas of the noblest and regnant part of our nature, must be the chief elements in our solution. The integrity and reliability of our nature must be denied, and all reasoning rendered impossible, before we can repudiate these intuitions of our nature. They are verities and basis ideas, acting as motive powers, and as means and guides in our attempts to solve the problem of the universe, and as tests of our solution.

We call attention to the following postulates and data, furnished us by reason and common sense, as regulative ideas in solving the problem before us. We have, in consciousness, the knowledge of our own minds as intelligent causes, producing order, arrangement, co-ordination, adjustment, adaptation, design, plan, method, and system.

We intuitively recognize our powers as second causes, used and controlled by an intelligent cause, our mind, to produce these effects. We intuitively recognize intelligent causation whenever we see order, adjustment, co-ordination, adaptation, design, plan, and system, with prevision of, and provision for, what follows. Have we these characteristics in the phenomena of nature? In the regular recurrence of the same phenomena, in the same order and sequence, under the same circumstances, which the physicist calls law, we see order. In the harmonious action of the forces of nature, which the physicist calls acting under law, we see arrangement and co-ordination. In the uniform action of these forces, invariably producing the same phenomena, we see the adaptation of the forces to the production of the phenomena. In the action of each animal and plant, in accordance with the laws of its

being and its surroundings, we see that each animal and plant was designed for this life, and its powers were contrived to meet this life as an end. In the harmonious action of all forces and all existences of nature, we see that these forces and existences were adjusted to each other and the whole of nature. In all this we see plan, system, method, and law.

In the regular development and evolution of all nature, forward on an ascending scale of progression, that is claimed by the physicist, we see plan, forethought, and providence. A man who denies this bids adieu to all reason, and can not be reasoned with further. All this we see in nature, as can be proved by the language of the physicist in describing nature. All this which we see in each atom, organ, and system in nature, and in all nature, has its necessary and only conceivable ground in mind. A man who denies this can not be reasoned with, for he denies the fundamental affirmations of reason. We might as well attempt to reason with a man who denies that two and two are four.

Man is conscious, and intuitively reasons that order, arrangement, adjustment, adaptation, design, plan, method and system, in his own actions, have their necessary ground in his own conscious, personal, willing, rational, free, moral, responsible self. He as intuitively reasons that co-ordination, order, arrangement, adjustment, design, plan, law, method and system in nature, with prevision of what follows, and provision for it, have their necessary and only conceivable ground in a conscious, personal, willing, free, moral, rational mind, or in an Intelligent Cause. The physicist must either deny that there is co-ordination, adjustment, law, method and system in nature, and that these imply design, prevision of, and provision for all that is evolved in the harmonious and orderly scale of development according to law, for which he contends, or he must deny that they have their necessary ground in mind. If he does either, he bids adieu to reason, and contradicts common sense, and is not worthy one moment's further thought. We speak confidently and positively, for we are conscious that we rest on the bed rock of fundamental truth, on the primordial basis of all reasoning. There has been so much dogmatism and impudent and arrogant denial of the plainest affirmations of common sense, and the fundamental intuitions of our rational nature, by those who profess to be, *par excellence*, men of science, that it is high time that the right of common sense and reason to be heard and respected be asserted with at least as great confidence and positiveness, as has been displayed in the absurd denial of their authority.

It is quite fashionable now, in circles that arrogate to themselves all the science in the world, to sneer at all appeals to reason, and especially to intuitions, as *metaphysics*, on the principle that if you can not meet an opponent fairly, call him a bad name, and raise a prejudice against him. Doubtless the old metaphysicians, who attempted to evolve a system of nature out of their internal consciousness, by *a priori* principles of reason, committed many absurd blunders; but they at least used common sense in the outset, in recognizing the truth that intuition, the fundamental principles and ideas of reason, must be the basis of all reasoning, and showed some respect for reason and some regard for common sense. But the physicist philosopher begins by denying the plainest affirmations of reason and common sense, or by sneering at them as metaphysics. The metaphysician attempted to determine the theory of the universe, without investigating the universe itself. The physicist attempts to investigate by casting to one side the only means of investigating, the intuitions of reason. The blunder of the metaphysician is that of the person who takes the proper tools, but does not use them right. The blunder of the physicist is that of the person who attempts to accomplish a piece of work by casting to one side the only implements by which he can possibly accomplish it. And certainly the metaphysician never perpetrated greater blunders than the physicist. The philosophy that assures us that perhaps there are worlds where two and two are five, or that design does not imply intelligence, that religion had its origin in dread of hunger, and conscience in a full stomach, and assimilates a parent's happiness in his child to pleasures of the appetite, or that assures us that there is no causation in the universe, and that our minds are identical with the force that boils a kettle, and that the brain secretes thought as the liver secretes bile, or grows eloquent over the divine chemistry of the human organism, that transmutes cabbage into a divine tragedy of Hamlet, never ought to laugh at the Council of Salamanca, or any set of priests, theologians, or metaphysicians. Inductive philosophy, which these scientists profess to take as their guide, demands that we investigate the existences and phenomena of nature, and learn: What are their attributes, qualities, acts and characteristics in full? When, how often, in what order, and during what time do they occur? In what manner do they occur? In all this investigation, we are to be controlled by the fundamental principles of thought, furnished by reason, which the physicist calls metaphysics. From these data we are to determine who or what produced the phenomena, or the efficient cause. The physicist denies this by asserting that there is no such thing as causation in nature. Lastly, we determine the final cause, or inquire for what purpose did the phenomena transpire. This the physicist utterly denies, assuring us that all inquiry into final cause is absurd.

The physicist can not proceed one step in the investigations, to which he confines the use of the word science, without basing them on, and controlling them by, what he calls metaphysics. He can not even commence his investigations without using them as his means of investigation, and they suggested to him the idea of investigation. His methods of investigation are based on metaphysics; his comparisons, anticipations, deductions and speculations are all metaphysical. He can not move one step in scientific investigation without the rational ideas of co-ordination, arrangement, adaptation, adjustment, order, law, system, method, design, prevision and provision. It is on these he bases his speculations and deductions. It is by means of these that he prosecutes his investigations, although he discards them as metaphysics. The regulative ideas of all science, the controlling principles of all knowledge, are metaphysical conceptions, above and back of all objects and phenomena. We can not move or think in scientific research without them. No one makes more use of them than does the physicist in generalizing his phenomena, and in classifying them in accordance with ideal conceptions, and in speculating on them.

Physical science, as now conducted, asks: What are the objects and phenomena? When, how often, in what order, and during what time do they transpire? What are their characteristics? In what form do they exist? In what manner did they occur? All this is based on and controlled by a rational set of regulative ideas and principles furnished by metaphysics. It can accomplish this work only by using these ideas and being controlled by them; and when it has determined the when, the how, and the what of phenomena, it has accomplished its work. It can not accomplish the real purpose and end of all investigation. It can not tell us what produced the phonemena, nor for what purpose or end they were produced. An orderly arrangement and classification of the phenomena, and then labeling them in bundles, is not an explanation of the phenomena, or of their cause, efficient or final.

Physicists seem to think that when they have classified the phenomena of nature into bundles, and ticketed them with high sounding names, and laid them on the shelves of systems, they have explained the phenomena. When reason asks who or what produced the phenomena, and for what end or purpose they were produced, a claim is set up that the classification explains all that. When this is exposed, we are gravely told that it is unscientific to inquire concerning the efficient cause of phenomena, or to ask who produced all this, and it is especially unscientific to inquire into the final cause, or for what purpose was all this done. The physicist well knows that if these queries are pressed, there is no avoiding intelligent causation in the universe; hence the attempt to silence them. But men *will* ask these questions. They regard them as the real goal of science. The work of the physicist is but the means and steps to these higher ends, the real object of all scientific research. Physical science is utterly impotent to settle these queries, the only useful end of physical investigation. Reason alone can settle them by means of metaphysics and religion. It takes the phenomena and their characteristics, as furnished by physical science, and from the nature of the phenomena and their characteristics, determine, the cause—the nature and character of the efficient cause; and the final cause, or the purpose or end designed to be accomplished by the phenomena. Reason insists that the phenomena that physical science has reduced to a system, is the product of mind, or mind could not reduce them to system. Unless there is reason in the phenomena, unless the ideas of reason are realized in the phenomena, they can not be reduced to an intellectual, intelligent system by reason. Reason is not troubled about the law of the phenomena, or how this mind operated in producing the phenomena. Let physical science reveal all it can concerning the law of the phenomena, and reason will accept it all and insist that it is a path along which mind must have moved, and along which mind alone could have moved. If produced independent of mind, there would not be realized in it any rational idea that would render it intelligible to mind, and all science and scientific research would be impossible.

Then we re-assert the supremacy of metaphysics over the bundles of labeled facts, arranged on the shelves of the physicist, for without metaphysics their discovery and classification would have been impossible; and without metaphysics they will remain forever valueless. The physicist is especially opposed to an attempt to find teleology in nature, or to an attempt to find the object or purpose of any thing in nature, for the very idea of purpose or design implies the pre-existence of mind. Hence, in violation of all sense and every principle of reason, we have a denial of all teleology in nature, even in such wonderful organs as the eye or the human hand. But the physicist can not describe the simplest operation or phenomenon of nature, without using teleological language, and recognizing teleology all through them. Darwin exhausts the vocabulary of teleological language in describing the processes of nature. "Wonderful design—admirable contrivance—beautiful adjustment—skillful adaptation—wise co-ordination." He speaks of gins, traps, spring guns, machines, contrivances. He invariably speaks of organs as designed and planned for their special functions as purposes or ends. Wallace admits this, and apologizes for it, and says the terms are metaphorical, and that the necessity of using such terms, which he admits,is an infirmity of thought. If the terms are metaphorical, the processes of nature must contain teleological characteristics, or there would be no resemblance between man's works and nature's processess, permitting the use of the metaphors, much less necessitating such use. But the use is not metaphorical, nor an infirmity of thought. The truth is, that processes of nature are of such a character that there can be no description of them without such use of teleological terms and expressions. There is teleology in nature. All nature is constructed on the principle of teleology, and no man can construe nature, or describe nature or its processes, except in teleological language. It is not an infirmity of thought, but a necessity and power of truth. The infirmity, the worse than infirmity, the absurd folly or dishonest deception, is in the madness and fatuity that attempts to deny it, and has to recognize it in its own language while denying it and attempting to disprove it.

The physicist dislikes the use of terms that necessarily imply the existence of mind when describing the processes of nature; and yet he can not move one step in describing the processes or operations of nature, or the constitution of nature without using them. Does he say fixed laws or processes? The term implies the pre-existence of mind that fixed the laws and processes. Does he say established laws or processes? The term implies the pre-existence of mind that established the laws and processes. Does he say regular uniform or orderly laws or processes? The terms imply the pre-existence of mind that regulated the laws and gave them this uniform and unvarying order. Does he speak of the order of nature? The term implies the pre-existence of mind that gave to it this order. Does he say unalterable, invariable, unchanging laws or processes? The terms imply co-ordination and adjustment of these mutually interacting laws and processes in this unchanging, unalterable operation. This implies the pre-existence of mind to produce such co-ordination and adjustment. Indeed,

the universe, from each molecule in it up to the infinite universe.

The arrangement, co-ordination, and adjustment of all forces and powers in nature, is also in accordance with exact mathematical law, another realization of one of the highest conceptions of reason. Then these forces are co-ordinated, adjusted, and adapted to each other and the whole of nature. There is a regular and uniform succession of new existences. All this necessarily implies design, plan, method, system, and law. There has been, from the commencement of organic existence, an evolution of new species conformable to fixed and definite ideal archetypes, which necessarily implies a comprehensive plan and law, system and method, and co-ordination, adjustment, and adaptation. All these have their necessary ground in reason and thought. There is, all through organic nature, the adjustment and adaptation of organs to special functions. Diversified homologous organs, which are made to fulfill analogous functions, and the same organs made to fulfill various functions, yet maintaining a general plan, necessarily implies knowledge, alternativity and choice. All these have their necessary and only conceivable ground in reason and thought. All these, also, show prevision of, and provision for, coming existences. So does the progressive unfolding of species in accordance with ideal archetypal forms. So does the provision for coming existences revealed by geology. So also does the course of evolution claimed by the physicist. All this has its only conceivable ground in reason and thought.

We have in the universe also these facts, which have their necessary ground in reason and thought, since they have a necessary relation to moral ideas and ends. There is a universal tendency to discriminate between acts as voluntary and involuntary, and to attach accountability and responsibility to the former, and regard them as either right or wrong. All this indicates a relation to an immutable standard of right. The universal sense of dependence, obligation and duty indicates relation to superior power, to absolute authority. The universal consciousness of accountability and responsibility, and

the universal conviction that we endure the consequences of our actions, as a reward or punishment, indicates a relation to a Supreme Judge. The happiness that we see resulting from good conduct, and the misery we see resulting from evil conduct, here in this life, and the universal anticipation of a future life, in which it will be the same, indicates a relation to a Supreme Judge and Executive.

As the physicist professes to take reason as his means of solving the problem and his standard, these universal and catholic ideas of reason, and the highest ideas of the noblest and regnant part of our nature, must be the chief elements in our solution. The integrity and reliability of our nature must be denied, and all reasoning rendered impossible, before we can repudiate these intuitions of our nature. They are verities and basis ideas, acting as motive powers, and as means and guides in our attempts to solve the problem of the universe, and as tests of our solution.

We call attention to the following postulates and data, furnished us by reason and common sense, as regulative ideas in solving the problem before us. We have, in consciousness, the knowledge of our own minds as intelligent causes, producing order, arrangement, co-ordination, adjustment, adaptation, design, plan, method, and system.

We intuitively recognize our powers as second causes, used and controlled by an intelligent cause, our mind, to produce these effects. We intuitively recognize intelligent causation whenever we see order, adjustment, co-ordination, adaptation, design, plan, and system, with prevision of, and provision for, what follows. Have we these characteristics in the phenomena of nature? In the regular recurrence of the same phenomena, in the same order and sequence, under the same circumstances, which the physicist calls law, we see order. In the harmonious action of the forces of nature, which the physicist calls acting under law, we see arrangement and co-ordination. In the uniform action of these forces, invariably producing the same phenomena, we see the adaptation of the forces to the production of the phenomena. In the action of each animal and plant, in accordance with the laws of its

the universe, from each molecule in it up to the infinite universe.

The arrangement, co-ordination, and adjustment of all forces and powers in nature, is also in accordance with exact mathematical law, another realization of one of the highest conceptions of reason. Then these forces are co-ordinated, adjusted, and adapted to each other and the whole of nature. There is a regular and uniform succession of new existences. All this necessarily implies design, plan, method, system, and law. There has been, from the commencement of organic existence, an evolution of new species conformable to fixed and definite ideal archetypes, which necessarily implies a comprehensive plan and law, system and method, and co-ordination, adjustment, and adaptation. All these have their necessary ground in reason and thought. There is, all through organic nature, the adjustment and adaptation of organs to special functions. Diversified homologous organs, which are made to fulfill analogous functions, and the same organs made to fulfill various functions, yet maintaining a general plan, necessarily implies knowledge, alternativity and choice. All these have their necessary and only conceivable ground in reason and thought. All these, also, show prevision of, and provision for, coming existences. So does the progressive unfolding of species in accordance with ideal archetypal forms. So does the provision for coming existences revealed by geology. So also does the course of evolution claimed by the physicist. All this has its only conceivable ground in reason and thought.

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the universal conviction that we endure the consequences of our actions, as a reward or punishment, indicates a relation to a Supreme Judge. The happiness that we see resulting from good conduct, and the misery we see resulting from evil conduct, here in this life, and the universal anticipation of a future life, in which it will be the same, indicates a relation to a Supreme Judge and Executive.

As the physicist professes to take reason as his means of solving the problem and his standard, these universal and catholic ideas of reason, and the highest ideas of the noblest and regnant part of our nature, must be the chief elements in our solution. The integrity and reliability of our nature must be denied, and all reasoning rendered impossible, before we can repudiate these intuitions of our nature. They are verities and basis ideas, acting as motive powers, and as means and guides in our attempts to solve the problem of the universe, and as tests of our solution.

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being and its surroundings, we see that each animal and plant was designed for this life, and its powers were contrived to meet this life as an end. In the harmonious action of all forces and all existences of nature, we see that these forces and existences were adjusted to each other and the whole of nature. In all this we see plan, system, method, and law.

In the regular development and evolution of all nature, forward on an ascending scale of progression, that is claimed by the physicist, we see plan, forethought, and providence. A man who denies this bids adieu to all reason, and can not be reasoned with further. All this we see in nature, as can be proved by the language of the physicist in describing nature. All this which we see in each atom, organ, and system in nature, and in all nature, has its necessary and only conceivable ground in mind. A man who denies this can not be reasoned with, for he denies the fundamental affirmations of reason. We might as well attempt to reason with a man who denies that two and two are four.

Man is conscious, and intuitively reasons that order, arrangement, adjustment, adaptation, design, plan, method and system, in his own actions, have their necessary ground in his own conscious, personal, willing, rational, free, moral, responsible self. He as intuitively reasons that co-ordination, order, arrangement, adjustment, design, plan, law, method and system in nature, with prevision of what follows, and provision for it, have their necessary and only conceivable ground in a conscious, personal, willing, free, moral, rational mind, or in an Intelligent Cause. The physicist must either deny that there is co-ordination, adjustment, law, method and system in nature, and that these imply design, prevision of, and provision for all that is evolved in the harmonious and orderly scale of development according to law, for which he contends, or he must deny that they have their necessary ground in mind. If he does either, he bids adieu to reason, and contradicts common sense, and is not worthy one moment's further thought. We speak confidently and positively, for we are conscious that we rest on the bed rock of fundamental truth, on the primordial basis of all reasoning. There has been so much dogmatism and impudent and arrogant denial of the plainest affirmations of common sense, and the fundamental intuitions of our rational nature, by those who profess to be, *par excellence*, men of science, that it is high time that the right of common sense and reason to be heard and respected be asserted with at least as great confidence and positiveness, as has been displayed in the absurd denial of their authority.

It is quite fashionable now, in circles that arrogate to themselves all the science in the world, to sneer at all appeals to reason, and especially to intuitions, as *metaphysics*, on the principle that if you can not meet an opponent fairly, call him a bad name, and raise a prejudice against him. Doubtless the old metaphysicians, who attempted to evolve a system of nature out of their internal consciousness, by *a priori* principles of reason, committed many absurd blunders; but they at least used common sense in the outset, in recognizing the truth that intuition, the fundamental principles and ideas of reason, must be the basis of all reasoning, and showed some respect for reason and some regard for common sense. But the physicist philosopher begins by denying the plainest affirmations of reason and common sense, or by sneering at them as metaphysics. The metaphysician attempted to determine the theory of the universe, without investigating the universe itself. The physicist attempts to investigate by casting to one side the only means of investigating, the intuitions of reason. The blunder of the metaphysician is that of the person who takes the proper tools, but does not use them right. The blunder of the physicist is that of the person who attempts to accomplish a piece of work by casting to one side the only implements by which he can possibly accomplish it. And certainly the metaphysician never perpetrated greater blunders than the physicist. The philosophy that assures us that perhaps there are worlds where two and two are five, or that design does not imply intelligence, that religion had its origin in dread of hunger, and conscience in a full stomach, and assimilates a parent's happiness in his child to pleasures of the appetite, or that assures us that there is no causation in the universe, and that our minds are identical with the force that boils a kettle, and that the brain secretes thought as the liver secretes bile, or grows eloquent over the divine chemistry of the human organism, that transmutes cabbage into a divine tragedy of Hamlet, never ought to laugh at the Council of Salamanca, or any set of priests, theologians, or metaphysicians. Inductive philosophy, which these scientists profess to take as their guide, demands that we investigate the existences and phenomena of nature, and learn: What are their attributes, qualities, acts and characteristics in full? When, how often, in what order, and during what time do they occur? In what manner do they occur? In all this investigation, we are to be controlled by the fundamental principles of thought, furnished by reason, which the physicist calls metaphysics. From these data we are to determine who or what produced the phenomena, or the efficient cause. The physicist denies this by asserting that there is no such thing as causation in nature. Lastly, we determine the final cause, or inquire for what purpose did the phenomena transpire. This the physicist utterly denies, assuring us that all inquiry into final cause is absurd.

The physicist can not proceed one step in the investigations, to which he confines the use of the word science, without basing them on, and controlling them by, what he calls metaphysics. He can not even commence his investigations without using them as his means of investigation, and they suggested to him the idea of investigation. His methods of investigation are based on metaphysics; his comparisons, anticipations, deductions and speculations are all metaphysical. He can not move one step in scientific investigation without the rational ideas of co-ordination, arrangement, adaptation, adjustment, order, law, system, method, design, prevision and provision. It is on these he bases his speculations and deductions. It is by means of these that he prosecutes his investigations, although he discards them as metaphysics. The regulative ideas of all science, the controlling principles of all knowledge, are metaphysical conceptions, above and back of all objects and phenomena. We can not move or think in scientific research without them. No one makes more use of them than does the physicist in generalizing his phenomena, and in classifying them in accordance with ideal conceptions, and in speculating on them.

Physical science, as now conducted, asks: What are the objects and phenomena? When, how often, in what order, and during what time do they transpire? What are their characteristics? In what form do they exist? In what manner did they occur? All this is based on and controlled by a rational set of regulative ideas and principles furnished by metaphysics. It can accomplish this work only by using these ideas and being controlled by them; and when it has determined the when, the how, and the what of phenomena, it has accomplished its work. It can not accomplish the real purpose and end of all investigation. It can not tell us what produced the phonemena, nor for what purpose or end they were produced. An orderly arrangement and classification of the phenomena, and then labeling them in bundles, is not an explanation of the phenomena, or of their cause, efficient or final.

Physicists seem to think that when they have classified the phenomena of nature into bundles, and ticketed them with high sounding names, and laid them on the shelves of systems, they have explained the phenomena. When reason asks who or what produced the phenomena, and for what end or purpose they were produced, a claim is set up that the classification explains all that. When this is exposed, we are gravely told that it is unscientific to inquire concerning the efficient cause of phenomena, or to ask who produced all this, and it is especially unscientific to inquire into the final cause, or for what purpose was all this done. The physicist well knows that if these queries are pressed, there is no avoiding intelligent causation in the universe; hence the attempt to silence them. But men *will* ask these questions. They regard them as the real goal of science. The work of the physicist is but the means and steps to these higher ends, the real object of all scientific research. Physical science is utterly impotent to settle these queries, the only useful end of physical investigation. Reason alone can settle them by means of metaphysics and religion. It takes the phenomena and their characteristics, as furnished by physical science, and from the nature of the phenomena and their characteristics, determine, the cause—the nature and character of the efficient cause; and the final cause, or the purpose or end designed to be accomplished by the phenomena. Reason insists that the phenomena that physical science has reduced to a system, is the product of mind, or mind could not reduce them to system. Unless there is reason in the phenomena, unless the ideas of reason are realized in the phenomena, they can not be reduced to an intellectual, intelligent system by reason. Reason is not troubled about the law of the phenomena, or how this mind operated in producing the phenomena. Let physical science reveal all it can concerning the law of the phenomena, and reason will accept it all and insist that it is a path along which mind must have moved, and along which mind alone could have moved. If produced independent of mind, there would not be realized in it any rational idea that would render it intelligible to mind, and all science and scientific research would be impossible.

Then we re-assert the supremacy of metaphysics over the bundles of labeled facts, arranged on the shelves of the physicist, for without metaphysics their discovery and classification would have been impossible; and without metaphysics they will remain forever valueless. The physicist is especially opposed to an attempt to find teleology in nature, or to an attempt to find the object or purpose of any thing in nature, for the very idea of purpose or design implies the pre-existence of mind. Hence, in violation of all sense and every principle of reason, we have a denial of all teleology in nature, even in such wonderful organs as the eye or the human hand. But the physicist can not describe the simplest operation or phenomenon of nature, without using teleological language, and recognizing teleology all through them. Darwin exhausts the vocabulary of teleological language in describing the processes of nature. "Wonderful design—admirable contrivance—beautiful adjustment—skillful adaptation—wise co-ordination." He speaks of gins, traps, spring guns, machines, contrivances. He invariably speaks of organs as designed and planned for their special functions as purposes or ends. Wallace admits this, and apologizes for it, and says the terms are metaphorical, and that the necessity of using such terms, which he admits,is an infirmity of thought. If the terms are metaphorical, the processes of nature must contain teleological characteristics, or there would be no resemblance between man's works and nature's processess, permitting the use of the metaphors, much less necessitating such use. But the use is not metaphorical, nor an infirmity of thought. The truth is, that processes of nature are of such a character that there can be no description of them without such use of teleological terms and expressions. There is teleology in nature. All nature is constructed on the principle of teleology, and no man can construe nature, or describe nature or its processes, except in teleological language. It is not an infirmity of thought, but a necessity and power of truth. The infirmity, the worse than infirmity, the absurd folly or dishonest deception, is in the madness and fatuity that attempts to deny it, and has to recognize it in its own language while denying it and attempting to disprove it.

The physicist dislikes the use of terms that necessarily imply the existence of mind when describing the processes of nature; and yet he can not move one step in describing the processes or operations of nature, or the constitution of nature without using them. Does he say fixed laws or processes? The term implies the pre-existence of mind that fixed the laws and processes. Does he say established laws or processes? The term implies the pre-existence of mind that established the laws and processes. Does he say regular uniform or orderly laws or processes? The terms imply the pre-existence of mind that regulated the laws and gave them this uniform and unvarying order. Does he speak of the order of nature? The term implies the pre-existence of mind that gave to it this order. Does he say unalterable, invariable, unchanging laws or processes? The terms imply co-ordination and adjustment of these mutually interacting laws and processes in this unchanging, unalterable operation. This implies the pre-existence of mind to produce such co-ordination and adjustment. Indeed, the very term law, so continually on the tongue of the physicist, is enough of itself to establish the pre-existence of mind. This is especially true when we consider what the physicist attributes to law. Hence, such is the primordial constitution of things, and such are the characteristics and nature of the processes and operations of nature, that we can not move one step in describing them without using terms that necessarily imply the pre-existence of mind. It is not an infirmity of thought, but a necessity of truth and reason. The physicist himself, when describing the constitution and processes of nature, or speaking of them, is compelled to use such terms and to so describe them, even while attempting to deny and disprove the great truth such use implies. In the course of evolution claimed by the physicist, we see co-ordination, plan, system, law, prevision, and provision, and he can not describe it without using these terms and recognizing these ideas in the evolution, for they are its fundamental characteristics.

The principal work of the physicist is the classification of phenomena, and yet he recoils from the inevitable consequences of such classification. He can classify phenomena only by means of the highest conceptions of pure reason. The most abstract ideas, the highest conceptions of pure reason alone will classify nature, and express the system there is in it. These highest conceptions of pure reason are realized in nature, or it is systematized in accordance with them. Then, if nature can be construed only by the highest exercise of reason, it must have been constructed in accordance with reason, and by reason. Lewes admits that science is compelled to arrange and co-ordinate all facts in nature by means of ideal conceptions, in a general conception or plan. Darwin admits that we can not describe the facts and processes of nature without using these rational ideas. All admit that they are thus compelled to use these rational ideas in describing the facts and processes of nature. Lewes attempts to evade the consequences, by terming this necessity an infirmity of thought. If this necessary and inevitable tendency of our minds be an infirmity, in what can we trust them? If these necessary ideas, these universal conceptions, these intuitions that we are compelled, by the constitution of our minds and the nature of things to have, when we view the phenomena of nature, deceive us, what can we trust? Rather let us use common sense, and accept them, and reject as a worse than infirmity, a monstrosity, that perversion of thought, so treasonable to the nature it pretends to accept, that would reject them. In what sense does the physicist accept reason as his standard, when he thus arrogantly casts to one side the necessary conceptions, the universal intuitions of reason, and the rational basis of all reasoning?

When physical science undertakes to show that the methods of nature are a path along which mind could not have moved, and did not move, it can only do so by showing that they are incoherent, unideal and irrational. When it has done this, it has destroyed all possibility of science, even in the limited sense of the physicist, for there can be no classification except in accordance with a rational or ideal conception. If such conceptions be not realized in nature, if it be not constructed in accordance with reason and by reason, it can not be construed by reason, or classified in accordance with reason, or rational and ideal conceptions; and all science is an impossibility, and the efforts of the physicist are as much a chimera as the child's search for the bag of gold at the foot of the rainbow. With a preposterous fatuity, those who claim to be *par excellence* the ones who are striving to render the universe intelligible, seem to think that they can only do so by denying all relation of the universe to intelligence. It can be rendered rational only by denying that reason has had any thing to do with it, or that there are any evidences that reason ever had any connection with it. We reaffirm, that if it takes mind to construe the universe, and it can be done only in accordance with the highest conceptions and ideas of reason, and by means of them, then these ideas are realized in the universe, and it was constructed in accordance with them, and by reason using them and governed by them—a reason which realized them in the universe. Let the reader keep ever in mind this postulate in examining the various solutions of the problem. When pressed with this thought, and silenced by it, the physicist seeks to evade it in another way. He can not evade the evidence of intelligent causation in the universe, and he attempts to cast to one side the conclusion, by urging that we can not have any knowledge, even an apprehension, of the infinite; and of course we can not apprehend or have any knowledge of Infinite Mind, or God. As we have already demonstrated, we can rise to an apprehension of the infinite in space and duration, and to a knowledge that they are infinite; and we can know some of the characteristics of the infinite in space and duration. This the physicist himself admits. He assumes, also, that matter and force are eternal, hence he assumes absolute being in matter and force; or the absolute, uncaused, and unconditioned in matter and force. Then, why not, we ask, have an apprehension of the absolute, uncaused and unconditioned in mind, as well as in matter and force? Why not have the infinite, absolute and unconditioned in mind force, as well as in other force? If, as we shall yet show, we have to place mind back of the primordial constitution of matter and force, to give them this constitution, then the absolute, the uncaused, the unconditioned, that all assume, and that all admit, must be mind. Why not admit mind to be eternal, as well as matter? Why make an idolatrous fetich of matter, and insult our rational and spiritual nature by elevating it above mind? Then we affirm, as another postulate, that we can apprehend the infinite, have a knowledge that it exists, and a knowledge of its attributes or characteristics. We prove this: 1. We have the terms infinite, absolute, etc., and as words are signs of ideas, man must have had the idea, or he never would have had the sign of it. 2. We have demonstrated that we have an apprehension of the infinite in space and duration, and of their characteristics. We know space and time are infinite, and we know their characteristics. 3. We show, by an examination of th language of those who deny that we can have an appreh sion of the infinite, that they assume that we have an a prehension of, and a knowledge of, the infinite in space, duration, matter and force. We claim that we can in mind as well. 4. When the physicist affirms that we can not apprehend the infinite, he apprehends it in his affirmative that we can not apprehend it. If we can have no knowledge of it, how can he affirm that we can not apprehend it? Let the reader keep in mind this postulate in examining the objections of the physicist.

There is an order pervading the universe that includes every atom, every organ, every animal, every plant, every species, every world, every system, the universe. There is an order and system in creation, in time, in succession, in method. It has existed through all epochs. There has been correlation of growths with surroundings and each other. There is a universal harmony in all nature and the universe. There is a co-ordination of forces. All this establishes a unity in the universe. The physicist also admits that we are compelled by the necessities and tendencies of our minds to coordinate and arrange all the facts of science into one system, by means of general conceptions of reason. The inevitable conclusion to be drawn from such a unitizing of the phenomena of the universe, is that such an order and harmony and unity can be secured only by the action of mind, or intelligence acting on a plan. It sets to one side the objection of the physicist, that even if we concede that the phenomena of nature teach intelligent causation, we would have many causes, and not one cause. Lewes admits this necessity and tendency of science and thought, to unitize all phenomena and facts of science into one system; but he, as usual, to evade its obvious theistic bearings, calls it an infirmity of thought. In no one thing does reason so exhibit its strength, as in these grand generalizations, and in unitizing the universe. In it, reason reaches one of the central ideas of the universe. Then this thought that there is one order, one system, one plan pervading the universe, is another postulate to be used in our work.

The physicist claims to take reason as his standard. From the twilight of authentic history to the present, in nine hundred and ninety-nine million, nine hundred and ninety-nine thousand, nine hundred and ninety-nine cases out of every hundred million, man's nature, human reason, has given and accepted these universal ideas, these intuitions: God, creation by him, government by him, responsibility to him, retribution by him, prayer, providence, religion, and worship. Pretending to accept reason as his standard, the physicist rejects these universal ideas of reason, the highest and most exalted conceptions of the noblest part of our nature. If there be, as the physicist claims, evolution, and evolution by law, or controlled by law, these ideas are the result of that evolution. Man is the highest product of evolution, and his rational, moral and religious nature the noblest part of his nature is the apex and crown of evolution. If this evolution be in accordance with law, and controlled by law, these ideas must be in accordance with that law, and be the highest expression of that law. Then, if true to his own standard, reason, the physicist should not reject these catholic ideas of reason. Above all, he should accept these ideas as the highest expression of the law of evolution, which he recognizes as the highest authority, and the controlling power in the universe. Then, accepting the highest expression of the physicist's law of evolution, and the highest result of evolution, and the highest conceptions of the noblest element of the crowning result of this evolution, and the standard of the physicist, we postulate these catholic ideas.

The question of absolute creation can not be settled by science—physical science, as the physicist uses the term. Using science in broader and truer meaning, and including metaphysics, mental and moral philosophy, and religion, and every domain of thought and truth, absolute creation is a question of science; but when used in the sense of mere physical science, absolute creation is foreign to, and above its sphere. Physical science can only investigate derivative creation through reproduction. It has neither data nor means of reaching them, that reach the question of absolute creation. The religious world has conceded too much to the physicist, when it allows him to attempt to settle the question of creation, the creation of species, or the origin of species, by his methods. If physical science has in its knowledge or experience the phenomenon to be accounted for, then it has the data to settle the question, and can apply its methods. But the origin of a new species, by the conditions set forth by Darwin, or by evolution, or any known process of nature, is utterly beyond the knowledge of science. It can show that previous to a certain period a species did not exist, and that after a certain period we meet with it; but it can not give a scrap of proof to show that any known process or force of nature ever produced a single species, in any period of the earth's history, during geological or historic time. Hence, so far from it being the province of physical science to settle the question of origin of species, it is utterly beyond its province. It is presumption and absurdity to attempt to apply the methods of physical science to the solution of the question, for there are no data to which its methods apply. It must be settled by reason alone. Reason and religion must settle the question of absolute creation, and it can not be done if we reject the most exalted ideas of reason on this very subject. Belief in the creative energy, and action of an intelligent cause, does not rest on the facts and grounds furnished by physical science, but on primary intuitions, that can no more be denied or set aside than the reason that evolves them. Physical science can no more test them or disprove them than it can the axioms of mathematics, for they do not rest on the facts of physical science any more than the axiom that the sum of the parts equals the whole, rests on the physical nature of the parts and the whole. Belief in the creative energy of intelligence can no more be tested by the tests of physical science than the chemist can determine in his crucible whether an affirmation of our moral nature that an act is wrong, is correct or not. Physical science can collect the phenomena and facts of the universe. It can reveal to us the time, the manner, and the characteristics of the phenomena. It can reveal the characteristics of the phenomena by the aid of reason. But the question, who produced the phenomena, and for what end were they produced, can only be settled by reason, using all the regulative ideas of our rational, moral and religious nature, as tested by these catholic intuitions. Until physical science can meet with a case of absolute creation, the question is beyond its province, and utterly foreign to it and its methods. It can only furnish to reason the data it uses in settling the question, and reason alone can decide it.

It is a violation of every principle of inductive philosophy, that refuses to investigate the unique phenomena of mental nature, so dissimilar to that of the rest of nature, and to reason from their characteristics to their cause. The physicist very properly investigates the phenomena of the rest of nature, and reasons from their characteristics to the cause, and the character of their cause. But, in violation of every principle of true philosophy, he either assumes the similarity of the phenomena of mental nature and the rest of nature; in contradiction of every sense, or in violation of every principle of common sense, he extends the results reached in the physical world to the radically dissimilar mental world. As we have said, we must investigate all nature and its phenomena, and especially the highest phenomena in nature—mental phenomena. Man's will is a cause and an element in nature, and gives us our entire idea of causation. We must take man's mental nature, his rational, moral, and religious nature, into account. We must include this highest part of nature, and its phenomena, the most exalted in nature, the regulative phenomena of all reasoning. In solving our problem, we have, as our highest idea, our most important element, man's will, mind, moral and religious nature, and all they suggest. Again, proving that nature is controlled by law, does not explain the cause of the phenomena of nature. It only establishes the character of the cause. It does not set to one side the idea of Creator and Ruler, but, on the contrary, it only establishes its truth. The question is, what is the character of the law? Is it a law of fatal, physical necessity, or a law of a rational being? Back of all ideas of matter lies the idea of the adaptation of the elements and properties of matter to each other, and their co-ordination and adjustment. Back of all ideas of force lies the idea of the adjustment of forces, co-ordinating them to each other. Invariableness of the law does not destroy the idea of adjustment and purpose. On the contrary, it only renders the law susceptible of being used by will for a purpose, by changing the conditions. Laws of nature are rendered subservient to purpose in nature, by applying other laws by means of mechanical or other contrivances, just as in art. In the wing of a bird, and in a tubular column is secured the greatest strength, with the greatest lightness of material. Then the character and nature of these laws, if they are laws of rational character, rational laws of intelligence, establishes the idea of Creator and Ruler!

Now if we have accomplished our purpose in this chapter, we have placed before the reader these postulates and data, to be used in solving our problem.

I. Our means of investigation, and our standard must be human reason, man's rational, moral, and religious nature.

II. We must accept all of man's mental nature, his moral and religious, as well as his rational nature. We can not pretend to take man's mental nature as our standard, and reject its highest and regnant element, his moral and religious nature.

III. We must accept the integrity and reliability of our nature in its each and every part, and the validity of its catholic ideas.

IV. The catholic ideas of our nature are our highest authority in solving the problem, and in testing our solution.

V. We must investigate all nature, and accept the phenomena of all nature, and not reject the phenomena of the most exalted part of nature—our moral and spiritual nature.

VI. We have given the regulative ideas of reason that must control our investigation, and test the result we reach.

VII. We have called the attention to the fact that all the catholic ideas of reason, and its most exalted ideas, are realized in the universe.

VIII. We have shown that the physicist rejects the intuition of causation—the intuition of teleology in nature. He rejects the intuitive recognition of mind in the terms used in describing the phenomena of nature. He rejects the great end and purpose of scientific research, the efficient and final causes of phenomena. He rejects the classification of phenomena by

shown that the most abstr
ideas of pure reason are realized in every part
these postulates and data, after an examinatio
solutions, we shall be ready to test the solut
mine which meets the demands of the problem
the test of these truths, by accepting, using
with them all.

CHAPTER III.

The Various Solutions of the Problem.

We have now placed before the reader the demands of the problem, and the data we have and must use in its solution. In this chapter we purpose a brief statement of the various solutions of the problem offered for our acceptance as preliminary to an examination of each.

I. *Chance.*—All phenomena and all being are, and ever have been, the result of chance or a blind fortuitous concourse of atoms. Perhaps no sane person ever did absolutely *believe* this theory, if we can call it such; but some have attempted to take refuge in it from the idea of divine government and retribution, or as an escape from the perplexities and mysteries enshrouding the problem of the universe.

II. *Fate or necessity.*—All things have been brought into being by resistless, undeviating fate and necessity, and are now governed by it. There are various phases of this theory. 1st. The present order of things is eternal, and holds on in its course under the control of relentless, unchanging necessity. 2d. At first there was a fortuitous concourse of atoms and phenomena, until the present order of things, by fate or chance, obtained and became an established and fatal necessity. This is the theory of ancient fatalists. 3d. Theories of development. Some think that development began in a fortuitous concourse and action of matter and force that resulted in evolution, or in starting a course of evolution. Others hold that this course of evolution is eternal, and has eternally been under the control of law. All atheistic theories of development are theories of fate or necessity. They have only added the term law to ancient theories. This law is a law of fatal necessity, not controlled by intelligence. The denial of spontaneity in nature, even in man and in mind, and of freedom of the will, providence, prayer, forgiveness of sin, and the talk of undeviating, unchanging law that abounds in the speculations of physical science and evolutionists, show that they are but modernized statements of ancient theories of fate. The ancient system of Lucretius and Epicurus were anticipations of modern speculations. Matter and force are eternal. Motion is an eternal and inherent property or state of force. Force in motion acts on matter, and matter in turn reacts and modifies force, and by their action, reaction, and interaction, is evolved inorganic, organic, and vital existences. So the ancient hylozoic theory was an anticipation of certain modern speculations. It assumed that the present order of things is eternal. The two entities or existences whence all sprang were matter and phenomena. Matter was pervaded by plastic life (life susceptible of being molded into all forms) and by intelligence. Tyndall's Belfast speech was but a modernized statement of this speculation of ancient thought.

III. *Theory of Nescience or Ignorance.*—There is a distinction between the me and the not-me, but we can know nothing of either absolutely or in their essence. We can only know that they exist, and learn and recognize their differentia. There is a distinction between mind and matter, but we can learn and believe nothing of either in regard to their absolute nature or essence. We can only know that they exist, and recognize their differences. We can learn and know nothing of the ultimate or absolute, and can know nothing of the infinite and unconditioned. We can learn nothing of ultimate causes, or of the Ultimate Cause, or of the Absolute or Infinite Cause. We can have no knowledge, not even an apprehension or idea of the infinite. It is folly to undertake to learn any thing concerning the infinite, or to speculate concerning it. Let us confine ourselves to the what we know exists, and to what we can learn concerning them; their differentia and their phenomena, although we can not learn any thing concerning their nature. We need not know any thing of the ultimate and infinite. It is not practical knowledge, nor is it scientific to attempt such inquiries. The term

God is merely an expression for a mode of the unknowable, like the term X in an indeterminate equation. All existences are the result of a force which is a mode of the unknowable. This misty conception of a nothing-something, or an indefinite something-nothing, is the *acme*, the *ne plus ultra* of all science. Concerning the force of which this phantasm is a mode we can know nothing, and can learn nothing. This theory was furnished to the atheists by illogical attempts of Christians to establish and defend the necessity of revelation. Rationalists claimed, by searching, to find out God—to attain to a complete knowledge of him. Apologists for Christianity took the position that reason could not know that which is infinite, and as a necessary consequence the Infinite must reveal himself. Spencer accepted the premise that reason can not know the infinite, and carried it out to a logical conclusion when he asserted that if reason could not know the Infinite, could not apprehend him by reason, neither could it by revelation. If reason could not apprehend the Infinite, it was impossible for the Infinite to reveal himself to what could not apprehend such a revelation of the Infinite. He thus decorously bowed the Creator out of the universe through the back door of nescience, opened by Hamilton and Mansel, and through which they supposed they had driven atheism, and then shut the door in our faces, and now coolly tells us that all inquiry concerning what is back of it is folly and unscientific. It is not the first time that misguided zeal has furnished weapons to an enemy. It is the most popular refuge of atheism at the present time.

IV. *Pantheism.*—In its extreme form it assumes that there is infinite, absolute being in matter and force alone. Neither is conscious or voluntary. They are subject to development, of necessity. This development continues from everlasting to everlasting. Eastern or Indian philosophy is pantheistic. So are many of the phases of modern evolution. Since a progression in eternity would have been perfect, and as things are not perfect, the Brahman invented a theory of cycles. Each existence, and the universe itself, runs endlessly through a series of cycles, ever returning to the starting at the close of each cycle. Modern evolution has resorted to the subterfuge to evade the same difficulty. It has each begin in a turbulent chaos, and has it close with a ca phe that reduces all existence to chaos, in which it com ces a new cycle. In this dreamy system, which has a fa tion for certain poetical, mystically inclined minds, we ar that in the finite alone do we know or apprehend the In The finite is the infinite in existence or realized. God is universe, and the universe is God. There is no consci power or intelligence in the universe except as developed the finite. God attains his highest consciousness in m Intelligence is ever rising from the boundless ocean of ex ence like vapor from the sea, and returning back to the infin ite and eternal ocean of being like the rain-drop to the sea Since this theory makes all phenomena and being a part of the ever-realizing infinite, the infinite realized, it destroy all distinction between conduct and acts. Sin and virtue are alike modes of the infinite, and alike in essence and nature. And since all being and phenomena are bound up in the Infinite, all freedom and responsibility are impossible, and mere chimeras.

There are various phases of pantheism. In some of its phases, God is merely a term for an universal force that exhibits intelligence only when modified by matter in organization. Certain phases of the evolution theory accord with this position. Or, God means merely a world soul like vital force in the tree. Some carry the conception higher, making the term God mean a world soul like the soul of the animal. The higher the organization in which it is manifested, the higher the expression of this vital force or world soul. Some make God merely latent or nascent life or intelligence pervading all matter, and susceptible of development by conditions, as latent heat is developed by conditions. In all these phases of pantheism, it is assumed that God attains his highest consciousness in man. They are really atheistic, and all these phases of pantheism are atheism. There is often an attempt to conceal this by taking refuge behind the use of such phases as God, the infinite, etc.; and often a denial of atheism is made with much assumed indignation, when the grossest atheism is hid under such subterfuges. There are theories professing to be theistic that are pantheistic in reality. God is recognized as Spirit and as eternally active and conscious, but he is related to the universe as the human spirit is to the body. Milton's theory that God and matter were alike self-existent and eternal is of this character. It strips God of independence and self-sustenance, and limits him, and subjects him to the necessary properties and laws of matter. We can not conceive of the universe as consisting, at first, of infinite mind and infinite matter, or of infinite mind and infinite laws that are self-existent, or of infinite mind and infinite resources, that are eternal and self-existent, without limiting and finiting God, by infinite matter, or infinite laws, or infinite resources; and entering on the descending inclined plane that will land us in the abyss of atheism. We must place mind back of all matter, law, and resources, creating, constituting, and co-ordinating them. Much of modern poetry sentimentalism and speculation is pantheistic. It has a fascination for dreamy, sentimental minds, inclined to mysticism. Spiritism is a system of pantheism, and often of the grossest kind.

V. *Theories of development or evolution.*—Of these there are three phases: Cosmical development, physiological development, and historical development. 1. *Cosmical development.* This undertakes to account for the origin, forms and motions of the planets and systems that constitute the physical universe, and for their physical constitution, and for the universe itself. 2. *Physiological development.* This undertakes to account for all life and varieties of life, both animal and vegetable, by what are called laws of nature, or natural law. 3. *Historical development.* This undertakes to account for the progress of the human race in arts, civilization, science, government, social and domestic life, religion and morality; and for all rational, moral, and religious ideas and systems, by natural law or laws of nature. Let us now examine them in detail: I. COSMICAL DEVELOPMENT. There are two phases of this theory. The one first proposed, merely attempted to account for the solar system, and then to extend the theory, by analogy, to the universe. It began by assuming that all the matter in the solar system was once united in a vast globe of highly heated vaporous or gaseous matter, surrounded by an atmosphere enormously expanded by extreme heat, to far beyond the present confines of the solar system. By the radiation of its heat into sidereal space, the fiery mass and heated atmosphere cooled and became greatly condensed. The motion imparted to each particle by heat caused a motion of the mass, which began to revolve around its center. As it cooled, the rotation on its axis increased, until the centrifugal force overcame gravity and cohesion, and revolving rings of vapor, revolving around their annular center and around the central mass, were projected into space. These, if uniform in density, might continue to revolve in an annular form, as did the rings of Saturn, but on account of unequal density and cohesion, would be apt to be broken up, and aggregated into masses as in the planets, revolving around the central mass in orbits, and on their own centers. These in turn might throw off rings like those of Saturn, and these might be broken up and aggregated in satellites, revolving on their axis, and around the primary, and with it around the central mass. Other systems in sidereal space were generated in this way, and perhaps a vast number of these by a still vaster mass, and so on, continually involving still vaster masses, until the absolutely infinite universe is included in the hypothesis.

The later phase was suggested by the *nebulæ* or cloud-like masses observed in all parts of the heavens. They were conjectured to be immense masses of stellar matter, or star-dust, in an exceedingly tenuous or gaseous condition. It was assumed that here were instances of systems in process of formation, or in the initial condition of all systems. This suggested the nebular hypothesis, which attempted to account for the universe, as the system just stated accounts for the solar system. It varies from that, in starting with the universe and reasoning down to the solar system, whereas that began with the solar system and passed out to the universe. All space, absolute space, was once pervaded by matter in the form of highly heated vapor, or matter in a gaseous condition, from intense heat, called fire-mist, or star-dust, or stellar vapor. In consequence of different degrees of density, arising from different degrees of heat, or other circumstances, such as differences in velocity or motion, or from some cause now inexplicable, aggregations of this fire-mist began around certain points, or in certain *nuclei.* In consequence of unequal centripetal velocities, or unequal densities of the particles, or some unknown cause, these converging and impinging particles began a rotary motion around the centers of convergency or of these *nuclei.* Then, by attraction of these *nuclei*, other particles were attracted, until vast portions of sidereal space were occupied by these enormous globes of highly heated gaseous matter, surrounded by a still vaster atmosphere, enormously expanded by intense heat. Immense portions of sidereal space, around these vast globes, were thus vacated by matter, and reduced to the condition of space outside of the atmosphere of our planets. Then began in each system the genesis of planets and satellites described in the former phase of the theory.

When a planet was first aggregated into a globular form, it was in a highly heated condition, a mass of highly heated gaseous matter, in which were all the elementary subtances of matter, (or that out of which they were formed,) in a chaotic mechanically mixed mass of intensely heated vapor or gas. Chemical action was latent as yet, or overcame by intense heat. After the lapse of an immense period of time, this globe cooled by radiation, so that crusts began to be formed on its surface. By the tidal influence of moon and sun, and by the eruption and explosive forces of its own mass, these were broken up for a long time. After a while, however, it became sufficiently cooled to form a permanent crust, subject, however, to great upheavals and fractures by the now confined fiery center. The water in the cooling mass, at first formed an envelope around it of steam or heated acid vapor, shrouding the planet that was without light or atmosphere. Then, this steam, being cooled, began to fall in dense rain, to be driven back in steam by the still heated crust, until at last the crust became sufficiently cooled to retain the water on its surface in an universal ocean. Chemical action had ere this began to form substances and compounds, and especially the first rock of the globe, that which formed the crust of the globe. By chemical action, water and air had been formed around the globe. Still the atmosphere was largely impregnated with vapor, acid vapor, and steam, and immense clouds and constant rain were the condition of the entire surface of the globe.

In the course of time, by the action of internal heat, portions of the earth's crust were elevated above the hitherto universal ocean, and subjected to the decomposing influences of air and water, and formed into earths. In consequence of original and inherent differences in the particles of fire-mist, or in consequence of the influence of different conditions on its particles, arose the different elementary substances, known as the original elements of matter, or the sixty elementary substances. In consequence of original and inherent differences in the particles of fire-mist, and in consequence of the influence of different conditions on the original particles of fire-mist, arose the different properties of these different elementary substances. In like manner, in consequence of original differences in the forces, or in consequence of different conditions to which the one force was subjected, arose the different forces of nature, or the different manifestations of the one force of the universe. If these differences of substances and properties of substances, and of forces and properties of forces, were in the original fire-mist, we can only say they were inherent, original, and eternal. If they arose from differences in conditions, these differences of conditions and influences are inexplicable, except so far as an explanation may be involved in the declaration that they are original, inherent, and eternal. By mechanical action of attraction, adhesion, and cohesion, homogeneous masses were formed out of the mixture containing all these elements. By chemical action, which is also inexplicable, except as we say it is inherent in matter, and original and eternal, arose the vast number of chemical compounds in nature. We have now the sixty original elementary substances, and the different properties of matter, and the different physical forces. We have homogeneous masses formed by mechanical action of forces, and chemical compounds formed by chemical action and crystallization. But we have no life, and no organic arrangement of matter, in which life is manifested. Some have cosmical evolution close before chemical action, and make chemical action the starting point and basis of physiological evolution, the starting point and basis of life and organic matter. Others make chemical action a part of cosmical evolution. It was evidently present and active in cosmical evolution long before life appeared; hence they make it a part of such evolution. They recognize the chasm between chemical action and crystallization, no matter how complex and wonderful; and life and organic matter, no matter how simple, and throw chemical action back into cosmical evolution, and begin physiological evolution on the other side of the chasm between organic and inorganic matter.

II. PHYSIOLOGICAL DEVELOPMENT.—This theory undertakes to account for all organic matter, and for all vegetable and animal life, and for all varieties of animal and vegetable life. The advocates of this theory have always experienced great difficulty in getting a starting point for this hypothesis. The query arises at the very commencement: Whence came life? Often an attempt is made to evade it, or to silence inquiry, but reason and common sense will not down at their bidding, or be evaded; but persistently press the query: Whence came that wonderful phenomenon called life? Was it originally, inherently, and eternally in matter? Was it and is it now latent or nascent in all matter? If not, why present now in some matter and not in other matter? If latent or nascent in some or all matter eternally, how is it developed and made active? When and how does it pass from its latent into an active form, or tangible form, and manifestations? What causes or conditions cause such a change? Whence came the conditions, and how do they accomplish such a change? If life is not latent in any or all matter, whence does it come when it appears? How can matter and force evolve what is not in them? Or what can evolve out of them what is not in them? If neither of them be true, then it must be a creation. It is thought that the new doctrine of correlation of forces solves this difficulty, and hence it is eagerly seized by the advocates of physiological developments, as a means of helping them out of the difficulty. It is stated thus. There are not several forces in the universe, much less several distinct and antagonistic forces. What appear to be such, are merely different manifestations of the one force pervading the universe. The different manifestations are but different modifications of this one force, caused by different conditions, or by difference in the matter or combinations or organization of the matter in which the force is manifested, or the different circumstances or conditions in which it is manifested. But immediately the query arises: "Is this statement true? Has it been demonstrated? Are vital and animal force and life, and their wonderful manifestations, the same force as seen in inorganic nature? Are sensation, life, instinct, reason, emotion, volition, thought, and mental and moral action produced by the same force as rustles the leaf and burns the brand?" Intuition and reason has ever made a distinction, have ever recognized an insuperable chasm between them. They can be shown to be antagonistic and mutually destructive of each other. But even if true, correlation of forces merely shifts the difficulty. It does not remove it, for still the query presses: How is this wonderful modification of this one force accomplished? Whence came these conditions, this organization that accomplishes these wonderful results?

All agree that there is a point at which and above which we can and do apprehend that life is present. All agree that there is a point below which and at which we apprehend that life is not present. In one case we apprehend that life and its manifestations are present, and that there is organic combination of matter, prevaded by life. In the other, life is not present, or its manifestations; and there is merely inorganic combination of matter, destitute of life; or an organic combination that has lost life. These points may not be coincident, and there may be a debatable land between them, yet there is a point, above which we can say there is life present, and organic combination of matter pervaded by life; and a point below which we can say there is no life, no organic combination pervaded by life. As to the origin or genesis of life when it does appear and become tangible, we have the theory of spontaneous generation in its various forms of archegenesis, heterogenesis, and abiogenesis. Archegenesis is based on the idea that life was latent or nascent in matter in its original and eternal constitution. It is developed or made active by chemical action or other conditions. Life is either a different manifestation of the one force pervading the universe, and the difference is caused by difference of organization of matter in which it is manifested, or other conditions. Or if it be a distinct and different force, it was eternally, originally, and inherently latent in matter, and was rendered active by conditions, chemical action or otherwise. Abiogenesis (or the production of life out of that which has no life) is the assumption that by suitable conditions, such as chemical action, electricity, or the action of some natural force or agent, life is evolved out of that which displays no life. Whether there is a real creation, or merely a radically different display of what already existed, is a question concerning which there are differences of opinion; and often fluctuations of opinion in the same persons, as they are pressed with different phases of this crucial difficulty. Heterogenesis (or the production of something strange, or foreign, or different) is applied to both archegenesis and abiogenesis, but it properly includes only the latter. The term heterogenesis has been applied also to the production by living organisms of something different from themselves. To avoid confusion, the latter phenomenon is now called xenogenesis (the production of something strange or unusual), and heterogenesis is applied only to the production or evolution of life out of what has no life.

Having life as a starting point, there are various phases of physiological development, to account for the origin of species and varieties of animal and vegetable life.

I. Through a force which is a mode of the unknowable.

II. Through external forces. 1. Transmutation of species by external surroundings. 2. Conflicts of individuals, resulting in survival of fittest or natural selection. Some extend these speculations back over the origin of life. Some include in the evolution the entire vital world, with mental and moral nature. Some exclude from the evolution mental and moral nature. Some say that the evolution was by insensible gradations throughout. Some say generally by insensible gradations, but admit occasional leaps have been made to bridge over certain chasms, such as exist between inorganic and organic nature, or between vegetable and animal existence, or between animal nature and human nature.

III. Through an internal force influenced by external conditions. Some think that there is an inherent power or impulse towards evolution in all manifestations of force, and all forms of nature.

IV. Through the processes of generation and re-production. 1. Prolonged development of the animal in its embryonical state has given to it new characteristics. 2. Accelerated development in embryonic condition has given new characteristics. 3. Retarded or imperfect development in embryonic condition has changed characteristics. 4. Extraordinary births of this character, or extraordinary births occasioned by unusual influences on mother or embryo, have produced new and unusual characteristics, and these have been perpetuated and transmitted by law of heredity. 5. Parthenogenesis. Some have even imagined that new characteristics or new species came from births where there was no impregnation, a sort of miraculous effort of nature, a sort of self-impregnation!

One of the above theories, evolution by conflicts of individuals, resulting in survival of fittest or *natural selection*, first conceived by Mr. Wallace, but shortly after conceived and published by Mr. Darwin, independent of any knowledge of Mr. Wallace's ideas, has obtained great notoriety as Darwinism, Darwin's hypothesis, or Darwin's theory. As many talk much about it that are ignorant of it, and expose themselves to ridicule, and injure the cause they would defend, and as many things are called Darwinism, not included by Darwin in his hypothesis, we shall attempt a concise statement of this, now celebrated hypothesis, as well as we can gather it from Darwin's writings, and the conception that others have formed of it. Darwin has never made a formal statement of his hypothesis. It can only be gathered in detached fragments in his somewhat voluminous writings. Our statement may be criticised, and certain statements of Darwin quoted against it, for Darwin is not always consistent with his former statements; but we believe it to be in the main correct. It may be stated as including, 1. Certain assumptions. 2. Certain statements that he calls laws. 3. Certain things needed to render the hypothesis possible or plausible. 4. The gaps or failures in the hypothesis.

I. He assumes the existence of matter. Whether self-existent and eternal, or created, he does not say. The affinities and tendencies of his system, and the drift of his speculations are towards the self-existence of matter.

II. He assumes the existence and activity of physical forces, or of the different manifestations of the one physical force. Whether mind antedated these forces, and created and co-ordinated them, and now controls them; or whether mind co-existed with these forces, and acts in them and with them; or whether they are self-existent and eternal, and mind merely a different manifestation of physical force; or whether mind is evolved by physical force, he does not say. The tendencies of his system, and the drift of his writings, are towards the eternity and self-existence of physical forces.

III. He assumes the existence of life as a starting point. He neither assumes nor denies spontaneous generation. He neither assumes nor denies the eternal and inherent existence of plastic life in matter. He neither assumes nor denies the evolution of life out of matter and physical force, or by means of them. He does not say whether he regards life merely as a different manifestation or a modification of physical force. He does not define life, nor does he, except in a vague expression, which we will soon examine, tell us whence life comes. The affinities and drift of his speculations are towards an eternal plastic life-force in all matter, or evolution of life out of matter and force.

IV. He, on rare occasions, speaks of the creation of life and organic matter. He does not say whether created by intelligence, or created by evolution by means of matter and force. The drift of his speculations is towards creation by evolution out of matter and physical force, or by means of them.

V. He speaks once at least of the creation of a few primordial germs, or of one primordial germ. He does not tell us whether this was an absolute, direct creation by intelligence, or whether it was a creation by intelligence through second causes, or an evolution by matter and force. He does not say whether these germs were formed out of pre-existent matter or not. The affinities of his system are towards an evolution out of pre-existent matter by mere physical force.

VI. He assumes these germs to be susceptible of endless and almost infinite variations and development by conditions. Intelligence, or the action of intelligence, is no part of these conditions. He does not assign to intelligence any part in this evolution. In fact, he denies and ridicules the idea of intelligence having any connection with this evolution. He attempts to disprove it.

VII. He speaks once of the inbreathing of life into these germs by the Creator. Whether life was inbreathed by intelligence, or by physical forces, or was evolved by physical forces, or was merely physical force, that became life on account of the organization into which it entered, he does not say. The drift of his speculations is towards mere physical force, modified by organization of matter, and changed into what we call life. The tendency of his system, as seen in his followers' and his own writings, is towards evolution of germs out of pre-existent matter by physical force, and the evolution of life out of physical force by organization of matter.

VIII. From a few primordial germs, or from one primordial germ, have been developed all varieties of animal and vegetable life by the influence of suitable conditions.

IX. Organization, growth and reproduction are functions of all life, vegetable and animal, necessary functions. He does not say whence these functions came. He merely assumes them as necessary functions of life. They are the necessary functions of the primordial germs. They would, however, merely produce germs like themselves. Darwin's hypothesis really undertakes nothing more than to account for the production of varieties of life. Such are the assumptions necessary as a basis for Darwin's hypothesis. It will be readily seen that it leaves all the real mysteries of the great problem of existence untouched. It quietly ignores them by assuming their existence without one word as to their origin.

As we have said, the real object of Darwin's hypothesis is to account for the origin of the species and varieties of vegetable and animal life. It accounts for them thus:

1. Different conditions or circumstances surrounding different germs affected or influenced them differently. This Darwin calls the law of different conditions. Whence these different conditions came, he does not say. 2. Adaptation to different conditions, or the power to adapt itself to different conditions, existed in these germs. Whence came this wonderful adaptation, or wonderful power of adaptation, he does not say. 3. Different conditions and these adaptations, or power of adaptability, produced different characteristics in different germs, producing new forms and new characteristics. 4. The law of heredity, or the tendency of all life to beget that which is like itself, perpetuated these new characteristics. He does not tell us whence this law of heredity came, so opposed to the fortuity of the operations of blind, irrational physical force. 5. Law of over-production. All forms of life, especially the lower, increase in an enormous geometrical ratio in very short intervals, thus producing incalculable numbers. 6. This over-production produces a struggle for life. 7. In this struggle for life only those best qualified for the struggle, or the fittest, could survive and perpetuate themselves.

Such is Darwin's hypothesis, as he propounds it. In order to render it a working hypothesis, one that can be used in investigating nature, and giving a possible explanation of the phenomena for which it professes to account, and this is all that can be claimed for it, the following assumptions must also be made. Darwin and his adherents seem to have overlooked them, or to have built on them unconsciously:

1. And this is a fundamental and most important thought. All substances must be identical or convertible in order to render possible the infinite and absolute variations claimed by Darwin. Chemistry declares they are not; that there are over sixty absolutely distinct and radically different elements. Darwinism is in direct antagonism to this fundamental idea—this basis of chemistry; and this basis idea of chemistry renders the variations and changes claimed by Darwin an impossibility. 2. These different conditions must give improvements. The changes must be all in one direction. Variations must give better characteristics. The change must be from the simple towards the complex, from lower to higher, from useless to the useful. 3. The variation must be continually and infinitely in that one direction. It must be limitless and infinite in an upward direction. 4. Improvements must give greater capacity for the struggle for life—greater power to survive. 5. Or there is something in nature that conserves and preserves the fittest, the best, the complex, the higher, the most beautiful, the most useful, that always preserves improvements. 6 That there be produced out of what had no sex, an existence possessing sex. 7. That there be produced thus, at the same time, and in the same place, two of opposite sexes. 8. That whenever an improvement be produced by variation of conditions, there be produced at the same time and in the same place, two at least of opposite sexes, possessing this improvement, and that they unite in sexual union. 9. That their descendants unite thus with each other alone. 10. Or, that in each case, in the case of the introduction of sex, and in the case of each improvement, vast numbers be produced at the same time, and that they and their descendants unite with those having these improvements. One or the other of these alternatives would have to occur an almost infinite number of times during the course of evolution in the case of each improvement. We can not resist

asking how is all this conceivable without the originating energy, control and direction of mind.

11. That there be given an almost infinite period of time.

12. That there be a co-ordination, adjustment and correlation of the whole of this infinite series of variations during this almost infinite time to secure this continual and continued ascent in one direction. Such are the demands of Darwin's hypothesis, although he and his adherents ignore or overlook them. If the Darwinian hypothesis be advanced to account for the origin of species and varieties, without the originating, plan, direction and control of mind, it seems to me that if ever the statement of a position was a sufficient refutation of it, such is the case in this instance.

Professedly Theistic Theories of Development.—There are those who profess to be theists that are zealous advocates of evolution and development. Some assume the self-existence of matter and force. All matter is pervaded by a plastic force susceptible of being molded by conditions into all the manifestations we now see, and into inconceivably higher manifestations in the indefinite future. This force attains to life, sensation, consciousness, instinct, and reason in organic nature. It attains to its highest consciousness in man. Man is a part of God, and God is partly embodied in man, who is his highest embodiment and expression. Although this theory denies being atheistic, and uses the term God, and theistic terms, it is unadulterated atheism. Others believe in the self-existence of matter and force, and certain laws and properties, and also speak of a world-soul. By some, this world-soul and force are made identical. In all of these theories, this world-soul is bound up in matter, and controlled by these eternal laws and properties. Some seem to conceive of this world-soul as controlled and compelled by these laws and properties of matter and force, and bound up in them, as vital force is in the vegetable. Others seem to concede to the, world-soul the power to modify and control, to some extent, these principles and laws. At times they seem to regard the world-soul as distinct from force, and superior to it in some respects. At others, they seem to regard them as identical, or rather this world-soul is this universal force developed and displayed in life, sensation and intelligence. Some give to the universe a constitution similar in organization and a relation analogous to what popular theology gives to the organism of man. The world-soul, or God, sustains the same relation to matter and force that man's spirit does to the matter and physical forces of his body. God is as much subject to the laws of self-existent matter and force as the human spirit is to the matter and forces of the body, and no more independent of them. All these theories are pantheistic, and essentially atheistic. If certain elements in them are logically and consistently developed, the end is atheism. All theories that assume the eternity and self-existence of matter and force, aside from mind force, are essentially atheistic. We can not conceive of matter and God as co-existing without limiting and finiting God by matter and its properties. We can net conceive of God, and matter and force, aside from mind force or God, as co-existing, without finiting and limiting God by matter and force, and the properties of matter and force. We can not conceive of God as co-existing with eternal resources and laws, without finiting and limiting him by these resources and laws, although he use and control these resources, and act in accordance with these laws. We must place God antecedent to all matter, force, and law, bringing them into being, giving them existence, and their first constitution, and thus make mind the uncaused, the unconditioned, the absolute, the beginning and summation of all existence, being, and phenomena.

There are persons who believe that God is the only self-existence in the universe, and that matter and force, and their properties, are absolutely created by Him, who also believe in development and evolution. Some think that the Creator implanted in and stamped upon matter and force certain laws and principles, in accordance with which matter and force and these laws and principles have evolved all that exists. He implanted in matter and force a self-evolving energy, co-ordinated by certain laws, in accordance with which this energy has evolved all that exists. Some admit no direct or immediate act of the Creator, except in the first constitution of things. Some admit, in addition to this, direct acts to bridge over certain chasms in existence, such as exist between inorganic and organic matter, between matter destitute of life, and matter pervaded by life, between vegetable and animal life, between animals and man. Some who believe in eternal and self-existent matter and force, seem to recognize the necessity of direct acts of Creative Intelligence to bridge over these chasms, and the necessity of the co-existence of mind to co-ordinate and control matter and force and their properties in the first constitution of things. Some concede a full and direct creation of all things, but seem to think that when the Creator had completed creation, he left it to be governed by the laws and constitution he had stamped on it. He has no further connection with it than the watch-maker has with the watch after it leaves his hands. The universe is a perfect, self-controlling, self-regulating, perpetual motion, with which the author has no immediate connection. Of course all miracle, providence, and answer to prayer, are an impossibility. Some Christians admit answer to prayer and providence in Bible times, when there were miracles, but deny them now as strenuously as the rationalist. Some admit a sort of miracle, and answer to prayer and providence, but make them a part of the ordinary course of nature. The tendency of all such theories is to remove God from all connection with his works, from all immediate control of them, and from all communion and connection with man, and to erect a barrier between God and the human soul, and they are atheistic in tendency.

There are theists and Christians that believe in evolution in a modified sense, and in development. They believe in the creation of matter and force, and in the original constitution of the universe, and matter and force, by a creator. They accept the teachings of geology concerning the almost illimitable age of the universe and the earth. They believe that at first the universe was a chaotic mass, and that the Creator reduced it to form. Some say by natural forces and law, or second causes; others by direct creative power. For a long time it was unfitted for life in any form. After a long interval it became fitted for the lowest forms of life, and these were produced by direct creation and adapted to surroundings. Gradually the earth became unfitted for these lower forms, and they were removed, and by progression it became fitted for higher forms, and these were substituted by direct creation; and thus, by progressive development, has the world reached its present condition. They believe in development, but it is a development by creation; and in evolution, but it is an evolution of ideas and plan of a creative mind. Some think this development has been gradual and imperceptible, except by comparing vast intervals of time, and that the extinction of lower and the substitution of higher forms, has been imperceptible. Others think that great catastrophes have characterized the world's history, and have separated the times of these types of life from each other. Some think that all animals and plants sprang from on original pair of each species, and that there has been progress and development, in the forms and types of life created, as the earth progressed and conditions were fitted for them. Some think that in this course of creation, archetypal forms or ideas have controlled and determined the method of creation. They believe that these ideas of types and forms, these archetypal forms and ideas, can be traced through all nature, as controlling ideas. There is an ideal conception, and an ideal archetype, in accordance with which the radiata, the mollusca, the articulata, and the vertebrata have been created. There have been less general archetypal ideas that have controlled the creation of genera, and families, and groups. Species are variations from these archetypal ideas, subordinate to and controlled by them. These ideal archetypes will account, it is thought, for silent members, and useless organs, as conformities to the ideal conception. This theory is perfectly concurrent with a full belief of a full, direct creation and the Scriptures.

Some think a few simple archetypal forms were created, and that conditions have varied these and produced species and varieties by the action of natural law. These generally accept Darwin's hypothesis. Some go even so far as to say but one primitive germ was created, with all possibilities and susceptibilities of variation by conditions in accordance with law, implanted by the Creator. Some think that species are a direct creation, and that varieties alone are the result of difference of conditions. Such is the position of most intelligent believers of the Scriptures. Then we should be very careful to make a proper distinction between the terms development, evolution, progress in creation, and Darwinism. Development is a generic term, including all theories that present, as a fundamental conception, the idea of progress and improvement of the condition of the universe, or of the earth and the life and existence on it. It may be atheistic, without mind or plan, or theistic and controlled by mind and in accordance with a plan, gradually unfolded in the progress of the universe, earth and existences in them. It includes evolution as one of its methods. Evolution properly refers to a system of automatic development, and implies that all that can be developed was wrapped up in things at the beginning, and that they have been automatically created or self-developed. Evolution may be atheistic, recognizing only irrational matter and force, or theistic recognizing creation of matter and force, by mind co-ordinating matter and force for this evolution. Development may then be by evolution and be atheistic or theistic, or it may be by continued creations; and it may recognize creative energy and providence, and control at every step. Evolution may be applied also to the gradual unfolding of the plan of the creative mind. There may be evolution in the unfolding of the plan, and development in its application in creation. Darwinism is a part of evolution, or evolution applied to account for the origin of species and varieties of plants and animals. Then a believer in development may not be a believer in evolution, and a believer in evolution may not be a believer of Darwinism, and a believer in Darwinism may not be a believer in cosmical development.

We have been thus careful in giving these theories, and the many variations, shades, and blendings of them, that no one may err in following our argument, and that injustice may be done to no one. A man may be a believer in development, and even of evolution in certain senses, and be a firm believer of the Scriptures. Indeed, a person who reads intelligently the first chapters of Genesis, must believe in evolution of the plan, in the Divine Mind, in creation, and in progress and development in the course of creation described there. If he uses his senses in observation, he must believe in development and progress in nature, and that species of animals and plants are susceptible of great and wonderful variations. There may be great differences in opinion concerning the length of time of this development and progress, and concerning the extent of these variations of animals and plants. A person may accept the full theory of geologic epochs, and the almost illimitable age of the earth, and its theory of cosmical progress, and be a firm believer of the Scriptures, and of direct creation. Whether consistently or not, is a question in the minds of some; but there can be no denying the fact, without branding as infidels, some of the leading theologians of our day. A man may be a believer in development and evolution by successive steps, and be a believer of direct creation and of the Scriptures. He may be a believer of creation by law, and through the influence of conditions, and laws and forms of matter and force, and be a believer in God and creation, and in the religion of the Bible, and of the Bible in the main. He may not be consistent, and his theory of creation may be atheistic in tendency, but such a combination of views is possible and real. One may even believe in the eternity of matter and physical force and their laws and properties, and believe in the existence of God, and his creative energy and action in using them, and in the Bible. It is said that the poet Milton is an instance of this. A man may accept the hypothesis of Darwin, and be a believer of creation, God, revelation, and the Scriptures. He may be very inconsistent, but such is undeniably the fact.

Then a belief of evolution, Darwinism, and development is not necessarily atheism, or a denial of the Scriptures. There may be inconsistency in holding to these views at the same time, but such is the fact in multitudes of cases, and nothing is gained by denouncing such persons as infidels, or by arrogantly and dogmatically denying what we have stated. A belief in evolution, development, progress in creation, and in creation by law in certain senses, is very compatible with a belief of the Scriptures, for they teach these ideas. If, by development, evolution, and progress, we mean that there has been an evolution of the Divine plans in creation and redemption, and that there has been progress and development in carrying out the work in both cases, it is an idea clearly taught in the Scriptures, and, in fact, revelation is based on it; and it matters not whether the six days in Genesis be six periods or six literal days. Men accept the geologic theory of long time, epochs, and progress, and hold fast to the account in Genesis. Whether consistently or not, may be a question, but such is the case. If by the term "creation by law," is meant that the Creator pursued an orderly process in accordance with reason and the laws of reason and thought, and that there was order, system and law in his acts and processes of creation, we can not deny its truth. Nor that he employed the laws and forces that he created and established to accomplish certain results in creation. It is in this sense that the Duke of Argyll uses the term in his "Reign of Law," in which he is so strangely misunderstood by his able critic, Dr. Paine, in his great work, "Physiology of the Soul and Instinct." A man may believe that the Creator implanted in matter and force a self-evolving energy of development, that has produced all that we say has been created, and that he stamped on matter and force laws that control this energy and evolution, and that all things came into being in this way, and believe in God, creation and revelation. I will not say consistently, but such is the fact. One can believe that all species and varieties of animals and plants have been produced, as Darwinism claims, and believe in God, creation and revelation. Men can believe that the Creator implanted in matter and force a self-evolving energy, and that he stamped on them certain laws that controlled the energy in this development, and that he has co-ordinated the conditions that control and determine the result of this development, and that all existences came into being in this way, and believe in creation, God, and revelation. The author believes as firmly as any one, that these theories are atheistic, and gravitate toward atheism as necessarily as license does toward crime, and he believes that men are not consistent in believing these theories and retaining revelation; but he can not deny the fact that they do thus accept these theories, and retain revelation. Nothing can be gained by denying that such is the case, and by denouncing all who believe in development, evolution, and Darwin as of course atheists. It may gratify bigotry, but it can only proceed from ignorance or bigotry, and injures the cause such persons espouse and undertake to defend.

HISTORICAL DEVELOPMENT.—Based on atheistic theories of evolution and cosmical and physiological development, is the theory of *Historic Development.* When Darwin's hypothesis is applied to man, it includes this theory. It is assumed and taught in his "Descent of Man." It assumes that man is a development from lower animals, or from lower and animal-like types of the *genus homo*, now extinct; and that he began in a condition of brutal instinctive animalism, or in a state of brutal idiotic savagery. Men at first herded together like animals. There was an absolute domination of appetite and passion as in animals, and a tyranny of the stronger. There was no family, no society, no government, no law, no conscience, no morality, no religion, no use of implements, no civilization. The sexes herded together, and associated together during the period of desire, like animals, the stronger monopolizing the favors of the females. After awhile, they began to retain for themselves their favorites. These favorites began to retain for a longer period their young. Thus arose the family with polygamy (or the stronger males retaining several females), or in some cases polyandry (one female monopolizing several males). Then a higher organization of the family, and at last monogamy, and finally we are to end in free love. Such is the origin and development of the family and marriage relation. Men herded like animals at first, then separated into families. These grew into tribes, and tribes into nations. Or by conquest of weaker tribes or families, all were consolidated into nations.

There was at first a tyranny of the stronger over the weak, under the domination of appetite, passion, and selfishness. Then affection modified this tyranny in the family. Then policy or necessity modified it further in the tribe or nation. Then came government, despotic at first, and then despotism modified by custom, law, and constitution. Then greater freedom, and at last republicanism and democracy. Man was at first controlled by passion and selfishness. Then affection modified the action of passion and selfishness. Then there was an animal-like recognition of rights of persons and property, because deprivation caused pain. Then rational recognition of rights of persons and property. Then conscience, morality, duty, and obligation. There was at first use of bodily organs in appropriating food and slaying for food animals, and the use of spontaneous productions of the earth, like animals. Then use of clubs to knock off fruits, or to kill animals, or of stones to smash nuts, bones, or shells. Then shaping of clubs, and wood and stones into implements. Then the use of softer metals, and the formation of better implements and machines. Then the use of harder metals, until our present arts and machinery were reached. Man was at first without shelter. Then under trees or in forests and hollow trees, or in caves. Then booths, huts, rude hovels of wood and stone. Then better dwellings and architecture. At first, man was unclad, then used leaves and skins of slaughtered animals. Then prepared skins and rude garments. Then learned to use wool, silk, linen, cotton, and elaborate garments. He began in brutality and passed through savagery, barbarism, and civilization into enlightenment. He began in a dread of all that injured him, or a liking for all that benefited him. This deepened into awe, veneration and susperstition. He gave gifts to propitiate what injured, and offerings of gratitude to what benefited. He gave gifts and sacrifices to propitiate and secure the aid of these superior beings, as he regarded them, and thus grew up systems of religion. He at first had superstitious regard for all that benefited or injured him. He soon made these objects of worship intelligences, and worshiped many intelligences, or became a polytheist. Then the unity of the system of the universe suggested the control of one intelligence, and he passed into monotheism in Mosaism, Christianity, and Mohammedanism. He will at last pass into atheism. A favored few have reached that sublime goal now. Such is Historical Development.

CHAPTER IV.

TENDENCIES OF DEVELOPMENT, EVOLUTION AND DARWINISM.

IN our last chapter we gave the reader an outline of the various theories of development. In the present chapter we propose to inquire concerning the affinities and tendencies of these theories. When a new theory is presented, we naturally inquire: 1. What are the facts in the case? 2. Do they sustain the theory? 3. Is the theory true? 4. What will be the consequences of the theory? The last query is called the practical consideration or argument, and often determines with most minds the query, "Is the theory true?" Although a logical development of our argument would require that we now inquire, "Do the facts sustain these theories we have described?" yet that we may better understand them, and be the better prepared to examine them, we will pause to inquire, "What are the tendencies of these speculations?" Right here there is a warm conflict between the physicist and religionist. The theologian is continually urging the consequences of the speculations of the physicist, and the physicist, in turn, objecting that he has no right to do so. Formerly, when the theologian claimed the right to settle, by his assumptions and dogmas, all questions of science in every department, and all questions in every department of thought as well as religion and morals, the physicist was a continual source of annoyance to the theologian in his theorizings and speculations, by persistently and continually presenting facts and truths contradicting them, and also by urging the absurd consequences of such speculations.

The theologian always tried to silence the physicist and crush out his objection by claiming that his speculations should be free from the criticisms of the physicist because they were above his province, and above all criticism by him. But now the tables are turned. The physicist has established the paramount authority of his methods and deductions in the field of science, and has driven the metaphysical speculations of the theologian out of the field of science, except as they are used as instruments of investigation. Elated with his victory, he now attempts to assume the *role* played by the theologian in former days. He assumes that he is sole authority in his own department, and that his notions there should be unquestioned, and will not allow the theologian to question or even criticise his speculations and assumptions. He even assumes to enter the field of rational thought and morals and religion, and to decide, with the authority of a dictator, the most important and fundamental questions in them.

As the theologian once demanded that the physicist should accept his dicta unquestioned, even in his own department, so now the physicist demands that the theologian accept his decisions unquestioned, not only in the field of science, but also in the theologian's own field of metaphysics, morals, and religion. And now the theologian troubles the physicist. The physicist uses surmises and hypotheses as an approximation to the truth and as a means of reaching it. Within proper limits, such a course is legitimate. Some of the noblest achievements of physical science have been reached by this method. So long as these hypotheses are presented as guesses, and we are only asked to treat them as guesses, no one will complain; but when they are presented as established truth, and we are asked to unship the thought of the human mind, since the first intuition dawned on the first mind, and to make a mere guess, the basis and controlling idea of all thought, we have a right to ask, at least, "Is it possible, or probable," before we do so. And this, to the great annoyance of the physicist, the theologian insists on doing.

When the physicist has built up a theory on hypothesis and speculation, he often becomes infatuated with it, and demands that all accept it as established truth, and is amazed at, and enraged by, the theologian, who with unreasonable obstinacy, as it seems to him, enamored as he is by the creature of his brain, refuses to cast to one side cherished truth for mere speculation based on a guess.

Now, as the physicist was in former days justified in refusing to give up well established convictions at the beck of the theologian, and was justified in pointing out absurdities and contradictions, and fallacies in the speculations of the theologian; so the theologian is justified in rejecting the speculations and guesses of the physicist, especially since, as is often the case, they contradict the clearest declarations of our highest nature. The theologian is peculiarly qualified for this work, by his metaphysical and theological studies, especially when the physicist wanders over into his own field. It troubles the physicist to see his hobbies treated in this way. It shocks his bigotry and prejudices, just as the physicist once shocked the bigotry of the fanatic and religious enthusiast. It is human nature in its infirmity in each case, and one is as bigoted and unreasonable as the other. The physicist is the most excessively credulous and bigoted being on earth when pressed with the difficulties of his department.

Huxley can assume that we will yet see life emerge from dead matter, or be able to prove that it once did. He can assume this, in the face of all experience and sense, because the necessities of his theories demand it.

Tyndall can give to matter all the attributes of spirit and even divinity.

Kolliker can believe in births without impregnation, or in self-impregnation, and any assumption that the necessities of the theory may demand can be made with a faith that far exceeds the pious rant of the religious enthusiast, who cried, "I believe it, because it is impossible." We shall see before we are done, that the assumptions and absurdities of Hindoo mythology are eclipsed by the physicist, who calls himself, *par excellence*, a scientific person, and such stuff philosophy and science.

The physicist particularly objects to the theologian's continually urging the consequences of his theories, and there may be force in the objection. There is a superstitious bigotry that is always alarmed lest something new should disturb its old notions. Theologians should be certain that what they urge as the consequences are really the consequences of the theory. Above all, they should be certain that the theory, or its consequences, are opposed to established truth, rational, moral, or religious truth. It may be possible that they do not understand the theory, or that they are mistaken as to its logical consequences; and, above all, that they may be mistaken as to what constitutes rational, moral, and religious truth. They are very apt to mistake their own opinions and dogmas for moral and religious truth, when they are utterly opposed to it. It is in this way that all opposition to science has arisen in the religious world. Religious truth, and religion in its proper meaning, and the Scriptures, and Christianity, never had one particle of opposition to a single truth of science, and have not now.

Absurd dogmas of bigots and sectaries have been elevated to the throne belonging to religious and scriptural truth and Christianity. Science has stripped the wolf of the shepherd's clothing, and the usurper has persecuted science. I challenge skepticism to point to one precept of Christianity that sanctions persecution of any one for opinion's sake. In this way science has rendered great service to religion, in dethroning and overturning absurd religious dogmas, that have buried and obscured divine truth. A theory may be opposed to theological dogmas, and be in accordance with rational, moral, and religious truth.

On the other hand, the physicist must allow us to inquire concerning the consequences of his doctrines or theories, and we shall do so, whether he will or no. We are sometimes told, "We do not care for the consequences, provided the theory be true." There must be a limit to such an assertion. If the inevitable consequences of a theory be absurd or contradict well established truth, no matter of what kind, it can not be true. All truth is consistent, and nothing can be true in science that contradicts well established rational, moral, or religious truth. When urged, in reply, to a clear showing that the consequences of a scientific theory contradict some well established and undeniable religious or moral truth, the above declaration of the physicist has as bald fanaticism in it as there ever was in any utterance of a religious bigot. If the consequences are clearly shown to be absurd or contradictory of well established truth, no matter of what kind, the falsity of the theory is as clearly established as that two straight lines can not enclose a space.

We are often told, now, that the religious world should attend to its own affairs, and not interfere with matters of science. There might be some propriety in such a declaration if the ones making it were careful to observe their own rule, and if the physicist were careful to confine himself to the scientific field. But now, when the physicist presumes to decide the gravest problems of morality and religion, and to sneer at the clearest intuitions of our moral and religious nature, and scout them, such a caveat issued against the theologian'sexamining the speculations of the physicist is an insult to sense and justice. Now, when lectures and publications on scientific topics are continually assaulting every religious sentiment, and when scientific associations and their anniversaries are used, on account of the *eclat* that the occasion will give to the speaker and his declarations,by the principal officers of such associations, to flaunt in the face of the religious world the baldest infidelity, and to scout the fundamental truths of religion, self-defense will justify the religious world in repelling such an unprovoked and uncalled-for assault. If it did not, then it would be taunted with cowardice, and with knowing that it could not reply, and such silence would be construed into a confession of the falsity of religion. Now when the assault is repelled, and the marauder chastized, a cry of persecution is raised. Huxley and Tyndall have been in the habit of using their scientific lectures and anniversary addresses as occasions and means of throwing out innuendos and making attacks on religion, taking refuge behind the protection the world has thrown around science, preventing the theologian from assuming too much authority in its peculiar domain. They have used this protection as a means of carrying on an offensive, aggressive war against religion, and when theologians defend themselves they have taken refuge behind this rampart, and claimed its protection, while continuing the war and fighting the persons they have assailed, even while raising cries that this protection must be respected and their domain must not be invaded, and in such cries for respect to their rights. Such a course is as honorable as bushwhacking and guerrilla warfare under the protection of a treaty of peace, or marching into the territory of a friendly power under a flag of truce, and taking prisoners those who respected its sacredness. Common sense will justify the religious world in entering the enclosure used in so cowardly and perfidious a manner, and spiking its guns, or turning them on such unprovoked and treacherous assailants. Tyndall in his prayer test, and in his Belfast speech, ventured on a marauding excursion into the territory of the religious world beyond his protection, and the religious world have taken the marauder in hands and chastized him, and handed him back to his disciples a sadder, and it is to be hoped a wiser and better man.

We should respect the premises of another, but when we know he is erecting works and using his premises as a means to drive us out of ours, it would be folly to respect his premises then. The rights are mutual, and the obligation is mutual. Let physicists respect the rights and field of thought of the theologian, and remember that theologians have some rights that scientists are bound to respect. It would be folly to extend to the physicist the exemption he claims, since he is not only persistently erecting works to drive the theologian out of his own field, but he is continually and aggressively making the attempt. It is cowardly for the physicist to keep up this marauding war, and keep clamoring "Respect my territory! Don't attack *me!*" Again, since the physicist furnishes to the infidel nearly all his weapons in the deadly conflict waging between irreligion and religion, the theologian is warranted in treating as an enemy one who furnishes weapons, fighting ground and refuge to his enemy. He is justified in testing and destroying the weapons wielded against him, especially when in the conflict. It matters not what theory, nor from what quarter it came, that is wielded in an assault on religion, the theologian is justified in destroying it. But the theologian has as much at stake in the scientific field as the physicist, and as much right to work in it. The physicist, if religion be a reality and a truth, is concerned in the theological field of thought, and his priceless interests are at stake in the use that the religious world make of religion. As the physicist is vitally concerned in the religious teachings and influence of the theologian, so the theologian is vitally concerned in the results of the speculations of the physicist. All these departments of truth overlap each other, and are inseparably and vitally connected. Neither party can erect a Chinese wall of exclusion of the other, and the enclosure of itself alone. All truth is but part of one interwoven, vitally connected, and mutually dependent whole. The theologian has an undoubted right to criticize the physicist, and the physicist has an undoubted right to criticize the work of the theologian. The theologian has an undoubted right to enter the scientific field and prosecute all inquiry, and make all investigation and all criticism he can make. So has the physicist the same right in the religious and theological field. The physicist can only demand that the theologian, when in the scientific field, accept and submit to the authority of established truths of science, and that he use scientific methods and conform to the fundamental canons of science. The theologian, on the other hand, should insist that the physicist, when he enters the field of rational, moral or religious thought, accept and submit to the established truths of these fields, and that he use their methods, and conform to their fundamental canons and principles. Real science demands such a course.

We can not establish the truth or falsity of a scientific theory or statement by an appeal to moral and religious nature, nor by an appeal to moral and religious truth alone. The physicist should remember, also, that we can not establish moral and religious statements, nor decide moral or religious questions by an appeal to scientific data alone. Each department of truth has its own data, class of truths, rules of decision, and tests of truth. But all truth must be harmonious and consistent. No religious dogma can be true, or should be held for one moment, that contradicts one well established truth of science. This the physicist will most readily accept. But it is just as true that no scientific statement or theory can be true that contradicts our moral or religious nature, or its intuitions, or one moral or religious truth. This the physicist is not so willing to admit, but will ignore, contradict, and sneeringly deny the clearest intuitions of our moral and religious nature where they run counter to his speculations. Again, we assert that the rights and obligations of theology and physical science are mutual, and one as imperative and binding as the other. We have an undoubted right to inquire into the consequences and tendencies of the speculations of the physicist. Nay, it is our imperative duty to do so; and we are cowards and traitors to ourselves, to our fellow-men, and to God, if we do not do so. We can not separate physical science, literature, and moral and religious thought. Each has a vital connection with, and a most important bearing on, each of the other fields of thought. We can and must ask whether a theory accord with established truths and principles in other departments of truth. In no other way can we use all means of testing a statement or theory.

We object to the modern attempt to ignore our moral and religious nature, when investigating physical nature. We might as well attempt to give a person a knowledge of mathematics, by means of answers to problems, or teaching mechanical manipulation of figures and symbols, ignoring all the time all the theoretical part of mathematics. It is mockery to call a description of mere physical nature, a description of all nature. We might as well attempt to learn all about a living man from a corpse, or call a treatise on anatomy a full description of man. We object to the arrogant attempt to confine the terms *science*, *knowledge*, *practical science*, *practical knowledge*, to a mere classification of the phenomena of physical nature, a collection of the phenomena of physical nature into bundles, and labeling them, and laying on the shelves of these systems of speculation. Our minds, our spiritual nature, the phenomena of our rational, moral, and religious nature, and their intuitions and laws are the highest part of nature, and are as clearly established as the phenomena of physical nature, and, indeed, far more so, for they are nearer to us, and are the means by which the facts of physical science are established. They are the basis of our investigations in physical science, our means of investigation, and our regulative guide and test in so doing. They are the highest, the noblest part of nature, the regnant element of all nature. The self-styled scientist of to-day is narrow, one-sided, and bigoted. By what right does he refuse to investigate the highest part of nature, the regnant element of our nature? On what ground does he reject its clearest decisions, and sneer at moral and religious nature and truths? By what right does he call his field of investigation real science, practical science, useful instruction, and reject the highest intuitions of our spiritual nature? We have a notable instance of this in Huxley's approving quotation of Hume's narrow-minded and bigoted condemnation of all those works which he calls metaphysical. All works on mental and religious themes, and by implication, poetry, literature, and every thing except what pertains to physical science, would, by Hume and his disciple Huxley, be committed to the flames as useless. We have, in history, but one parallel case of narrow-minded, ignorant bigotry. The Arabian barbarian who burned the Alexandrian library reasoned in the same way: "If it contains any thing that is not in the Koran," said this bigot, "it is false, and should be burned. If it contains what is in the Koran, it is useless, and should be burned. Burn it, anyhow." So says the bigot Huxley, "If these books on religion, morals, mental science, and metaphysics, contain what is not in physical science, they are useless, and should be burned. If they contradict our speculations that we call science or physical science, as we teach, they are false, and should be burned!" There is as much ignorance and bigotry in one case as in the other. Unfortunately for the world the Arabian bigot could gratify his bigotry and plunge the world in night. Fortunately our English bigot can not extinguish the spiritual sun of the earth, that the rush-light of his speculations remain the only source of light and life. Mere physical investigations are science and practical knowledge, but the investigation of the phenomena of mind—the sublime reasonings of a Plato, a Socrates, a Solomon, an Augustine, and a Butler—are worthless folly. The speculations and hypotheses of a Darwin or a Huxley are science. Investigation of the minutiæ of physical nature are science, but investigation of man's mental and religious nature are not. Investigations of the tail of a bird, the wing of a bat, the rings of an insect, or the sexual gyrations of amorously inclined insects, are "science" and "practical knowledge," heaven save the mark! but a consideration of the aspirations, the hopes, the reasonings, and phenomena of our spirits is worthless, and should be committed to the flames.

With what claim to consistency can the physicist pretend to take human nature and reason as his standard, and reject the universal aspirations of man's highest nature, the universal affirmations of reason, and the regnant element of man's nature? On what ground can he claim to investigate nature and refuse to investigate the highest and most important department of nature. As well might a man pretend to describe a country, and leave out its people and their history and their achievements, merely describing the soil and geology of the country. Then the physicist is inconsistent, unphilosophical, unscientific, and bigoted. He refuses to recognize the only means of investigation, and to investigate them and learn their use. There is an arrogance also in the attitude of the physicists. We must not even venture to inquire whether the data on which they build their speculations be true, but we must accept them unquestioned; for are not they scientific men, and don't they know? No priest was ever more arrogant and dictatorial. We must not doubt their speculations, nor challenge the assumptions on which they base them, or we are abused as ignorant and bigoted, because we refuse to ignore the universal intuitions of the highest part of nature, when they conflict with these speculations and guesses of these physicists. No one must speak on these topics but physicists. Theologians especially must be mute, although the physicist will dogmatically decide the gravest problems in morals and religion, and wander out of his path to do so. He can use his field of speculation as a means of driving the theologian out of his own premises, furnish weapons to the enemies of religion, and wage a ceaseless war on religion himself; but the theologian must say nothing on science. We must accept the *dictum* of these men, their data, and their deductions, from them unquestioned, even when acknowledged to be a mere hypothesis, as is the case with Darwinism.

Now, as a freeman, although I am a priest, I dare to assert our freedom, and that priests have as good a right to investigate physical phenomena as any one, and are as competent to do so, and can do it as thoroughly. They can examine the data and speculations of the physicist. A large portion of them are educated men. They possess educated and disciplined minds, and in college acquired just the same elementary knowledge of every science that the physicist did. They begin life with an equal chance with the physicist. They can investigate physical science as well as men engaged in medicine, law, or teaching, as is the case with many of these men. Many of the grandest discoveries in all departments of scientific research have been made by these priests. Many of them are masters of these physicists in their own departments. Think of a chemist discarding a Priestley, or a geologist a Dawson, a Hitchcock, a Buckland, a Sedgwick or a Smith, because they were priests!

Even if this were not the case, men of common sense can decide whether a theory be in accordance with established facts, understood and admitted by all, or not; whether the data be proved or not; whether facts establish the theory or not. Especially they can compare the conflicting statements and data and reasonings of physicists, and decide between them. They must do so. They do so in medicine, law, and theology. The physicist does this himself. So can all men, and so can priests. Again, there is a wide difference between a scientist giving facts in science, and his speculations concerning their origin, and especially his ideas concerning their application in other fields of thought. We can accept Darwin's facts, and reject his guesses and speculations. He may be vastly our superior in knowledge of facts, and we his peers in speculations on them. Again, the theologian can be a much better judge of the application of the facts of physical science in theology, than the scientific man. Then we will accept Darwin and Huxley as authority in the facts of their departments and in matters where they are competent authority; but reject them as theologians, and criticise their speculations and metaphysics, for their speculations and metaphysics are of a very poor class. The very worst and most abstract of metaphysics are resorted to to construe the facts of physical science against religion. Metaphysics are used to destroy religion, and to destroy metaphysics, by the men who condemn them, and use the worst of metaphysics in condemning them. We say, then, to physicists, that we are not machines or serfs, but "we be freemen, and we were born so," and shall investigate and criticise and expose all that will not stand the test of truth. Since theologians recognize the reality and phenomena of the physical world and its laws, and accept them and are controlled by them in their investigations of the phenomena of the physical world, they certainly have an undoubted right to investigate the physical world. If physicists, who ignore the moral and religious world, and refuse to investigate it, or to accept or recognize its phenomena or great truths, or be controlled by its laws and methods of investigations, or canons of testimony, or testing truth, can pronounce on the most sacred and profound questions of morals and religion; why can not theologians enter the physical world, and use its methods, and pronounce on its questions? If physicists can set to one side all moral and religious intuitions of God, creation, providence, divine government, prayer, religion and worship, in a department which they despise, because they are ignorant of it—of which they are ignorant because they refuse to investigate it, or recognize its reality—why can not theologians be allowed to enter the field of the physicist, and, by his own methods and laws, set to one side his speculation and guesses, and his application of them to theology, and his blunders through ignorance in such applications?

Physicists are continually raising a clamor about persecution when their marauding into the theological field is chastized. No one persecutes them, but they claim the privilege of repelling their assaults on themselves, and of criticising such assaults. Before we will give up cherished truth, for the guesses of the physicist, we will at least venture to ask, "By what authority doest thou these things? and who gave thee this authority?" Physicists ridicule the narrow-mindedness, mistakes, and blunders of theologians. There are two sides to that question. Tyndall, Darwin, and Huxley are specialists, and ignorant outside of their departments. They are minute specialists in their own fields. They can not rise to general views, even in their own fields. They reject the great catholic idea that will enable them to do so. The real ends of all science, the efficient cause and final cause, they deny. Their method threatens the death of all true science, and all elevating scientific thought. All they and their disciples do, is to observe minute phenomena in time-succession, and collect them into bundles and label them. All ideas and purposes of broad generalizations and real scientific ends are ignored. Tyndall took, second-handed, from Draper what he presented in the historic part of his Belfast speech, and made gross blunders in every statement. He made blunders that would have subjected a student in a theological school to the ridicule of his class-mates. In every speech of these men, when they enter the theological and metaphysical field, they make mistakes that would subject a college student to a reprimand from his teacher. A philosophy that assumes that possibly two and two might be five, or that an infinite number of straight lines can constitute a finite surface; a philosophy that makes the sublime devotion that leads a mother to sacrifice herself for her child, spring from the same source as the pleasure of drinking wine, that finds the origin of religion in dread of hunger, and of conscience in a full stomach; that denies all causation in nature, all design in nature, or that design implies intelligence, or that we can learn of the character of the author of nature by his acts, and prates of a wonderful chemistry that transmutes a cabbage into a divine tragedy of Hamlet, ought to be very careful about ridiculing any set of preachers or theologians.

If bigotry is spoken of, was there ever greater bigotry than that of Huxley, that would burn all theological and metaphysical works, or of Fiske, a mere smatterer in science, that says of Agassiz, the prince of naturalists: "He is no more qualified than a child for the investigation of evolution. He uses sonorous phrases, empty phrases, dark metaphysical phrases, phrases concealing a thoroughly idiotic absence of thought and significance!" Is such abuse as this the lessons in charity and courtesy, and scientific mode of discussion that physicists are to furnish to theologians? And, finally, we are told that this greatest of naturalists, who had forgotten more about natural science than this smatterer knew, although he had an almost miraculous memory, did not exhibit in all his writings the slighest acquaintance with the development theory. Again, he tells us, so absolutely does he believe this hypothesis, this mere guess, this unproved speculation, that his mind is utterly unable to form sufficient conception of the opposite position to be able to frame a proposition expressing the opposite position. Will not this match the fanaticism of the bigot who cried, "I believe it, because it is impossible!"

Huxley tells that demolished theologians lie around the cradle of every science, like strangled snakes around the cradle of the infant Hercules. We retort, that during the last fifty years demolished skeptical scientists, with crushed heads, lie strewn along the path of theology, who have experienced the fate that the man Hercules dealt out to the hydra, whose hundred heads resembled the many phases of modern skepticism. Unless scientists can show a better spirit, let them cease to lecture theologians on the sins of theologians of former days. But have not scientists persecuted and assailed each other? What shall we say of the attacks of Tycho Brahe on Copernicus? or of the scientists of his day on Galileo? It is a notorious fact that much of the persecution he suffered came from scientists and not from priests? Harvey was persecuted by scientific men of his day, and not by priests alone. Indeed, it was from the former that he encountered greatest opposition. Indeed, the history of science is full of the jealousies, persecutions, and quarrels of scientific men. We would advise Dr. Draper to write a supplement to his history of the "Conflict between Science and Religion," in which he details the conflicts between science and science. We would also advise him to revise his last work, and make it what it is not, a truthful history. It is based on a falsehood, and its conclusions are false. Christianity did not oppose science, nor do the Scriptures. An ecclesiasticism that refused the Bible to men opposed science, and this is charged on Christianity and the Bible. All this is on a par with the honesty which disparages Christianity, and apologizes for and lauds Paganism, Mohammedanism, and all antagonistic systems.

Again, we are very gravely told that theologians should not speak or write on the religious bearings of these speculations of physicists, because they will be biased and interested in their investigations and decisions. This work must be done by men who have no bias in favor of theology. According to this profound philosophy, married men should not write upon or in defense of marriage, because they are interested and will be biased! Only bachelors or monks, opposed to marriage, should do so! Loyal men should not try traitors, law-abiding men should not try criminals; traitors and criminals should do this. We can not allow infidels and skeptics to settle these questions for us; nor can we allow the indifferent. There are cases where indifference is a crime, and not to have a bias in favor of certain things is a crime, and utterly disqualifies one for deciding these questions. It is absurd to say a man must have no bias on these questions. As well say a man must have no bias in favor of loyalty, chastity, and honesty in order to be qualified to investigate treason, lewdness, and crime. Such a lack of bias would itself be a crime, and utterly unfit him for investigation. We must also consider the consequences of a system. If a man's theories are, in consequences, treasonable and criminal, if treason and crime are their legitimate results, we must consider their consequences in investigating and deciding concerning the system. It would be criminal and madness not to do so. Then the very ignorance of theology claimed for these physicists utterly unfits them to render the decisions they have assumed to make. Their freedom from theological bias and knowledge that they claim, renders them utterly unfit for deciding questions of religion and morality. Lack of care or feeling would utterly disqualify them. Such lack of care or such ignorance would be criminal, and utterly disqualify them for what they have been assuming the right to do. But such claims of lack of feeling and bias are dishonest and hypocritical. There is intense feeling and bias, but it is on the wrong side of the question. There is a deep-seated hatred of religion and all religious truths, or else why do they step so entirely out of their way to sneer at and stab religion? It would be madness and criminal to trust such investigators—to trust the careless, the ignorant, or the hostile in such questions. Again, we can not, and should not, feel indifferent in such discussions. As well talk to a parent not to feel indignant in a matter in which the chastity of a daughter was at stake, or the virtue and morality of his children were imperiled. Say to him, "You must not feel indignant or excited! Let the indifferent or lewd experiment on your children, and view it with the eye of a philosopher, as a mere question of science!!"

Then the indifference or freedom from bias claimed for these men is false and hypocritical. It is impossible for us to have this indifference, and would be criminal were it possible. So would the refusal to look at the consequences of these speculations, or a refusal to investigate carefully the consequences in a moral and religious point of view. We have a right, the highest right, to inquire into these theories of Evolution, Development and Darwinism, and to inquire into the consequences of these speculations, and it is our highest duty to do so. It would be madness and a crime if we did not. We can not allow the gravest questions of our moral and religious nature to be investigated and experimented upon by the indifferent or hostile as mere matters of science, any more than we can allow treason and crime to flourish as experiments, or allow virtue and morality to be made mere matters of what is called scientific experiment and speculation. If these speculations contradict the moral and religious intuitions of our nature, we must reject and oppose them. We should and must speak in denunciation of them. The censure of Dr. Hodge by one of his critics, because he spoke in denunciation of certain tendencies of Darwinism, was as ill-timed as censure of a loyal, virtuous man for indignation and denunciation of treason and crime. Let us, then, inquire what are the tendencies of these theories of development and Darwinism, and especially what are their tendencies in morals and religion. We can accept the facts of Darwin's writings and reject their speculations, and we can accept him as authority in matters of fact in science, and reject him and Tyndall and Huxley and all of his class, when they leave their field and play the *role* of theologians. We can accept the decision of Philip sober, while we reject Philip drunk. We can accept the naturalist when he speaks as a naturalist, and reject the naturalist when he attempts to play the theologian, for theology can no more be settled by his methods than we can test moral quality in a crucible. The atheistic theories of evolution and development, those that are assuredly atheistic, we can dismiss at once, for their atheism and hostility to religion is avowed. So we can dismiss all theories which recognize only matter and force, and physical causes resident in them. All theories that attempt to account for all existence without any recognition of God or an Intelligent Cause are atheistic. So are all theories that remove out of the mind all idea of control, providence, and government by a personal God. Pantheistic theories of development, and certain professedly theistic theories of development, are open to the same objection.

But perhaps no better subject of such criticism could be chosen than Darwin's hypothesis. What are the tendencies of Darwinism? We can learn these:

I. From the writings of Darwin.

II. From the utterances of its principal adherents. A man is known by the company he keeps.

III. By the use that is made of the system.

What, then, are the tendencies of Darwinism in regard to the theistic argument, and religious and moral ideas? Its influence on morals we will reserve to another place. The various theistic arguments are the ontological, cosmological, teleological, ethical and intuitional. The principal argument is the teleological. It furnishes the occasions to the intuitional to evolve its great intuitions, that are the foundation of all arguments, and makes the ideas of the other arguments ideas of an intelligence. The teleological argument is based on the evidences of order, arrangement, adaptation, co-ordination, adjustment, design, plan, law, method, system, prevision and provision, seen in nature. Some theists have lately rejected the teleological argument. They have acted hastily and unwisely, for they have abandoned the only ground that suggests and gives validity to all arguments; and if this argument be not valid, then reasoning is an impossibility. The tendency of Darwinism is especially manifest in its bearings on the idea of teleology in nature. This is indicated in his use of the word "natural." In his speculations, it means:

I. Opposed to what is produced by man, or what is artificial.

II. Opposed to what is produced by intelligence.

III. Opposed to every thing not produced by purely physical causes. Phenomena produced by purely physical causes are natural, and they alone are natural.

This utterly excludes from nature all idea of God as creator, ruler, and providence. Of course all idea of teleology is excluded. Nature could have in it no teleology. Any thing teleological would not be natural, but artificial, or at least foreign to nature.

Darwinism is, in every phase of it, a most determined foe of the very idea of teleology. It refuses to inquire into, investigate or account for, the origin of matter, force, or life. It refuses to inquire into, investigate or account for the co-ordination, adjustment and adaptation of matter and its properties, force and its properties. It refuses to inquire into, investigate and account for its primordial germ, or the conditions surrounding such germs, or their adaptation to conditions, or power of adapting themselves to conditions. It refuses to inquire into and account for the properties of reproduction, growth and organization it ascribes to life. It assumes that conditions produce all variations, species and orders out of primordial germs, and refuses to inquire into the origin or account for these wonderful conditions. It assumes that all these variations will be in one direction, from simple to complex, from lower to higher, from useless to useful. It assumes that conditions produce improvements always. It assumes that improved characteristics fit for struggle for life, or that nature preserves the higher, the complex, the useful. Darwinism assumes all these elements or factors, and gives to them the efficiency of primordial causes; makes first causes and efficient causes of them. It makes first causes also of its laws or assumptions:

I. Different conditions surround different germs.

II. Adaptation to different conditions or power of adapting itself to different conditions in each germ.

III. Different conditions and adaptation to them produce new and improved characteristics in primordial germs.

IV. Law of heredity perpetuates these characteristics.

V. Law of over-production.

VI. Struggle for life caused by over-production.

VII. Survival of fittest in struggle for life.

All this is accomplished by matter and its properties, and force and its properties and manifestations. It presents the above laws, as it calls them, as first causes, and refuses to go back of them.

Such a system ignores all teleological thought and considerations. It leads the mind away from teleological considerations. It apparently removes all necessity for teleological considerations, and all possibility of teleology. It assumes to do away with all teleology in nature. The mind is led up face to face with these laws, as it calls them, and left with them as first causes. The mind is led through a long course of ingenious speculations, and curious facts, seemingly sustaining them, and strange variations produced, it is claimed, by the laws we have given above, and bewildered and amazed by them, is induced to accept the hypothesis as a solution of the entire phenomena of nature, and the problem of the universe. All necessity for creative power, and all evidence of it, is done away, as a myth, it is claimed, and a fetich, called natural selection, has produced every thing. As in our illustration in our introduction, we are led through a long series of intricate operations, in which skillful manipulation is displayed, and it is assumed that they are all correct, and we must accept the result as above all doubt. A careful mathematician would ask, as we said: Are the postulata possible and correct? Will the data give the equations? Will each equation follow legitimately from what precedes? Are all the processes and manipulations correct? Do the results contradict established facts and truths? If one of the questions were answered so as to invalidate the work, he would reject it entirely, regardless of the seeming accuracy of certain steps of the process, or of the skill in manipulation displayed in it. Darwin assumes all that is vital to his theory, without proof. Even then his assumed data will not give the result. The most important parts of the hypothesis, as it is builded up, have to be assumed. The results contradict established facts and truths. In all this there is not a single idea of teleology suggested, but every attempt is made to do away with even a conception of teleology. All necessity for, all evidence of it, and all possibility of it, are carefully excluded. And notwithstanding these fatal defects, and its tremendous results, we are asked to accept it, on account of the wonderful skill in minute phenomena, and the amazing knowledge of detail displayed in the intermediate steps of the hypothesis.

The hypothesis tends to lead men to ignore the great question of first cause, and to ignore God in their thoughts. It makes primal causes of its laws, which recognize matter and physical force alone. It goes farther, it denies boldly and utterly all idea of teleology in nature. It assumes and teaches that all order, arrangement, and co-ordination in nature, are the result of mere matter and force, working under a kind of fatal necessity it calls law. It denies that order, arrangement, and co-ordination imply design or plan. It denies all adaptation, adjustment, and design, all prevision of, or provision for, the results. It attempts to account for what men usually regard as adaptation, adjustment, by the operation of blind physical forces, without design or intelligence. It ridicules and scouts all idea of design in nature. The writings of Darwin and his adherents abound in such expressions. It undertakes to disprove all design in nature. The atheist declares that it has done so. The advocates of this system are generally atheists. Atheists are all believers of Darwinism. They hail it as a help out of the difficulties that have ever beset their position, and use it as such. They never were able to meet the evidences of order, adjustment, and design in nature. Darwinism has relieved all this insuperable objection by disproving, they claim, all design, and that order and co-ordination imply design. It is the main reliance of atheism at the present time, or its main argument in discussion with theism. Such are the tendencies of Darwinism, as avowed and taught by Darwin and his adherents. If we take the hypothesis as a part of the theory of evolution, it is simply blank atheism. True, Darwin does not avow cosmical development nor atheistic evolution. Indeed his theory is a chain without connection at either end. Few of the believers of his system are satisfied with his fragmentary hypothesis. They assume the whole theory of cosmical development. They assume the eternity of matter and force, and spontaneous generation of life, and use Darwinism only to complete the work. Darwin and his adherents deny all causation in nature, and all idea of causation, and substitute for it what they call time-succession. They deny all spontaneity in the universe, even in the mind of man. They dislike the classification of phenomena according to ideal conceptions. They dislike unitizing the phenomena of nature. They dislike and reject the catholic ideas of our religious nature. They sneer at mental and moral ideas and reasonings as metaphysics.

The reason for all this is that these ideas and considerations inevitably lead to the idea of God, and establish his existence. Their especial dislike of the teleological view of nature discloses the inherent and determined atheism of the system.

The question is often asked, "Is Darwin an atheist?" As he has never avowed that he is one, nor denied it, we can learn only by his expression of sentiment in his writings. The considerations pro and con are: *Con.* 1. He uses the term Creator. 2. He says life was inbreathed into a few forms by the Creator. 3. He says his system is not necessarily atheistic. 4. He has never avowed being an atheist.

Pro. 1. He denies, ridicules, and attacks all idea of teleology in nature. 2. He scouts the idea of God's having any thing to do with the phenomena he investigates. 3. He carefully and intentionally ignores all idea of Creator and God in his speculations. 4. His use of the term God, or Creator, seems to be merely a use of a popular term that was convenient as a name for what needed an appellation, and without attaching to it any meaning beyond Spencer's Unknowable. 5. He certainly does not, from his utter ignoring the word in his subsequent reasonings, attach to it any of the meaning or characteristic ideas that the term implies. 6. It seems to be merely a nominal use of a term in popular use, as a name for something that had, for convenience, to be named in his speculations, and without attaching any of the meaning popularly attached to the term. 7. There are strong indications that the term is used as a screen or blind to cover the atheistic character of his speculations, and to avoid the odium of atheism.

It looks very much as though it were a tub thrown to the theological whale. Shall we pronounce Darwinism to be atheism: *Con.* 1. Darwin asserts that his system is not necessarily atheistic. 2. Persons believe it who also believe in God and Creator.

Pro. 1. Atheists claim it as atheistic and as the foundation of atheism. 2. It is their principal reliance now in advocating atheism. 3. Its tendencies are palpably toward atheism. 4. It leads men into atheism almost invariably. 5. All atheists are believers of the theory, and nearly all believers of the theory are atheists. 6. It is utterly opposed to all teleology and all the leading ideas of theism. 7. It utterly destroys all idea of God as ruler, sustainer, and providence in the universe. It most palpably denies the teachings of the Scriptures in Genesis and the sanction given to them by Christ and his apostles. It most palpably denies all the catholic ideas of the Scriptures, concerning creation and providence and divine government. To accommodate the Scriptures to Darwinism, their declarations must be emptied of all meaning, and a new and foreign, and often opposite, meaning must be injected into them. Such are the bearings of the system of Darwinism on theism and religious ideas. We will reserve our examination of its influence on the morals and character and life of those who accept it to another place. We do not say that establishing the tendency of these speculations necessarily disproves them. It does so only thus far, if they contradict the catholic intuitions of our rational, moral, and religious nature, they can not be true; and if we take our nature as our standard, we must reject them.

CHAPTER V.

FAILURES OF EVOLUTION, DARWINISM, AND OTHER ATHEISTIC THEORIES.

WE have now progressed thus far in our work. We have presented an outline of the demands of the problem, also an outline of the data we must use in solving the problem. We then gave an outline of some of the solutions of the problem, and pointed out their tendencies. We are now ready to compare these solutions with the demands of the problem, and test them.

I. CHANCE; or a fortuitious concourse of atoms and of their existences and phenomena.—This theory is the despair of all reason and sense. Modern science has established one thing beyond cavil. All phenomena, existences, and nature are, under law, co-ordinated and uniform law. There is an order including every atom, every organ, every plant or animal, each world, each system, and the cosmos. This sufficiently disproves all theory of chance.

II. FATE.—If this mean that a fortuitious concourse of atoms and phenomena in the beginning, at last resulted in the present order of things, which has now become fixed and eternal, we reply that investigation has shown that in the first constitution of things there was co-ordination, law, and order, and has driven all idea of chance out of the universe. If it mean that the present order of things is eternal, the reply is that all that we see is finite, dependent, and perishable. The very idea of an eternal, infinite, independent series of the finite, dependent, and perishable is absurd. Again, investigation has shown that the present order of things is the result of a development, a progression. Then the present order of things can not be eternal in the present order. It must have had a beginning. In the universe we see too much order, system, plan, and law, to permit us to entertain, for one moment, the idea of chance; and too much disorder, alternativity and failure, to allow us to entertain the idea of resistless, undeviating fate. The only possible ground is a creative mind acting on a plan, in which freedom, to a certain extent, and alternativity, were a necessary part.

III. THEORIES OF EVOLUTION.—We shall first examine these at some length as one scheme, and when we reach physiological development, we shall examine Darwinism. We shall accept and use, as a basis for our reasoning, the axiom of the physicist, *Ex nihilo nihil fit*—"Out of nothing, nothing comes"—and give it its full application. The physicist says, "If out of nothing, nothing comes, then *something* must have existed forever." This we accept without question, and affirm, also, that there must be inherently and originally in this something all that is afterwards evolved out of it; for if something could evolve out of itself what was not in itself, it would be a producing of something out of nothing, and a violation of our axiom. Then we must postulate as the ground and source of all being, that which inherently and primordially includes all being and possibilities of being—which includes and contains potentially and eternally all being and possibilities of being. The issue between the atheist and theist is: Shall we postulate mind as the ground and source of all being? or shall we postulate matter and force, blind irrational force, and blind, insensate matter? There can be no evasion of this alternative. Either we must assume the eternity of mind, and make mind eternal, self-existing, independent, self-sustaining, and thus make mind the beginning, the ground and source of all being; or we must make matter and force, blind irrational force, and blind insensate matter, eternal, self-existent, independent, and self-sustaining. Holding the physicist inflexibly to his own axiom, "Out of nothing, nothing comes," we lay down as our basis idea, that we must assume or postulate the eternity, self-existence, independence, and self-sustenance of mind, and make mind the beginning and ground of all being. We must postulate that which contains potentially all that comes out of it. We must have in it potentially all that afterwards appears, whether by creation or evolution. If not in the ground or beginning potentially, it can not be evolved out of it without violating our axiom, "Out of nothing, nothing comes."

We postulate mind for these reasons:

I. All our ideas of spontaneity, spontaneous, self-acting power, of force and causation, have their origin in our consciousness of our minds and wills, as spontaneous, self-acting power, energizing power in action, controlling power and force, and as causes producing effects. The only spontaneity, spontaneous, self-acting power or force that we know is mind. Hence, the only self-acting, spontaneous power, such as must be the origin of this evolution, the origin of all force, all activity of force, must have its origin in mind. The only efficient causation, of which we have any knowledge, is mind. If we trace the displays of force seen in the universe, through all its activities and channels of display, back to its origin, we will find that it is an expression of power exerted by mind, the only spontaneous, self-acting force or cause, the only efficient cause of which we have any knowledge.

II. The superiority of mind over matter. The physicist admits this, for he regards mind as the highest result of evolution, and tells us that evolution will give us inconceivably higher developments of mind in the future.

III. The power of mind over matter, controlling, subordinating and using it, demonstrates that matter exists for mind, and is subordinate to it.

IV. We call especial attention to this thought. The primordial constitution of matter and force is such as to demand the pre-existence of mind anterior to such first constitution of matter and force, to give to them this constitution. The sixty original elements of matter, and the essential properties of matter, the forces and the properties of these forces, are coordinated, arranged, adjusted, and adapted in order, method, system, exhibiting design, plan, and law, with prevision of, and provision for, all that afterwards appears. In this are realized the highest ideas of reason. The highest and most abstract ideas of reason, are realized in the primordial constitution of things. All this has its only conceivable ground in mind. Then mind must have existed anterior to the first constitution of matter and force, to give to them this primordial constitution.

V. Mind is the only adequate beginning and ground for life, sensation, instinct, reason, and moral nature and character.

VI. If we postulate mind as the ground and beginning of all being, we have adequate ground for all being, and have no further difficulty to account for the beginning of life, sensation, instinct, reason, and moral nature and character.

VII. The rational and moral intuitions of our nature demand such a basis for all being, and are satisfied with no other.

We refuse to accept the position of the physicist when he postulates matter and force, blind, irrational force, and blind, insensate matter, as the beginning and ground of all being, for these reasons:

I. There must be in this ground self-activity, spontaneity, spontaneous, self-acting force. Since the primordial constitution of matter and force, and the course of evolution are in accordance with order, co-ordination, adjustment, plan, method, and system, as the physicist admits, when he speaks of evolution by law, the law of evolution and the law of nature, this power must be power co-ordinated, adjusted, and adapted, and regulated in a plan, method, and system according to law. If we admitted a blind, aimless, purposeless, necessary activity in blind, irrational force and matter, it would not give one of these characteristics we see in the primordial constitution of matter and force, and in the course of evolution. The very highest ideas of reason are realized in all this. Then in the ground of all being we must have spontaneous, self-active power, regulated, co-ordinated, and adjusted according to the highest ideas of reason. This has no ground in blind, irrational matter and force.

II. Matter and physical force are inferior in being attributes and manifestations to mind. This, the physicist admits for he makes mind the highest product of evolution. It is absurd to make the inferior the source or cause of the superior.

III. Matter and physical force are subordinate to mind, inferior to mind, the servants of mind, and exist for the uses of mind.

IV. The primordial constitution of matter and force is such as could have come into being or existed at all, only with mind existing anterior to such constitutions and causing it. In the primordial constitution of matter and force—the first constitution of the sixty original elements of matter and the essential properties of matter, in the primordial constitution of force, and the essential powers and properties of force—there are co-ordination, arrangement, adjustment, into order, method, system, and plan, exhibiting adaptation, design, and law, with prevision of, and provision for, all that afterwards appears. The very highest conceptions of reason are realized in this primordial constitution of matter and force. It is in accordance with the highest and most abstract ideas of reason. This necessitates the pre-existence of mind anterior to such primordial constitution of matter and force, to give to matter and force this first constitution.

V. The primordial constitution of things is such as to prove matter and force to be subordinate agents in their first constitution, the product of mind and manufactured articles. The facts mentioned in No. 4 clearly establish this.

VI. Matter and force, blind, irrational, insensate matter and force, are no adequate basis for spontaneity, self-activity, spontaneous, self-acting force, life, sensation, instinct, reason, moral nature, and moral character. They do not contain them, nor a sufficient ground for them; hence they can not be evolved out of them.

VII. If we postulate matter and force as the ground of all being, we have either to steal clandestinely, grain by grain, during an almost infinite interval, the whole of spontaneity, self-acting life, sensation, instinct, reason, moral nature, and causation, and foist them, illicitly and furtively, into matter and force during the course of development or evolution claimed by the physicist, or are forced to do what Tyndall attempted in his Belfast speech with an audacity that would have been sublime had it not been so gross an insult to common sense, assume or take by force the whole question—not beg it, but arrogantly assume it—by foisting into matter at the beginning all that we wish afterwards to evolve out of it. This speech is especially valuable as a confession, by one of the great lights of evolution, that their assumption that matter and force can evolve what is not in them is absurd, and that their furtive theft of life and causation, even during the infinite time asked by Darwin, is also illogical and absurd.

He attempts to cut the gordian knot by audaciously depositing or foisting into matter, at the beginning, all that he wants afterwards to evolve out of it. In doing this we trample under foot all common sense and reason, and every principle of inductive philosophy. We make a god, an infinite fetich, of matter, and assign to it all that we, if materialists, refuse to accept in the being or nature of God or infinite mind or absolute cause. We make an infinite fetich of matter, and trample under foot every principle of reason and common sense, in assigning to blind, insensate matter and blind, irrational force, what reason and all experience declare belong to mind alone. We trample under foot every intuition of our rational, moral, and religious nature, which invariably affirms that these attributes, characteristics, and results can be assigned to mind, and to mind alone. We have to assign to matter the very attributes and characteristics of God that the physicist finds, or pretends to find, it impossible to conceive, and in violation of common sense, which says these characteristics must inhere in mind, and can not belong to matter. As a matter of fact and experience, we have no knowledge of matter or experience of it, except as possessing the essential properties—extension, impenetrability, porosity, density, rarity, ductility, elasticity, malleability, inertia, form, and situation. We can not conceive of it as existing without these properties. We can not conceive of force as existing without its manifestations, attraction, repulsion, adhesion, cohesion, heat, motion, electricity, and chemical action. We can not conceive of matter and force as existing without these properties and characteristics, and manifestations, and their co-ordination, arrangement and adjustment, in order, method, and system, exhibiting plan, design, adaptation, and law, with purpose and prevision of, and provision for, all that afterwards appears. All this necessitates the pre-existence of mind anterior to the primordial constitution of matter and force, to give to matter and force such first constitution. These characteristics of the primal constitution of matter and force, prove matter and force to be, in their very primordial constitution, subordinate agents, manufactured articles, the products of mind. This forever sets to one side the assumption of the physicist, of the eternity, self-existence, independence, and self-sustenance of matter and force; and places mind anterior to them, to give them being. The thoughtful reflection of the reader is asked on this point.

Suppose, however, we attempt to hold in conception those nondescript, unthinkable inconceivables, matter and force, without essential properties or manifestations, and without co-ordination, adjustment and adaptation of them; whence came these properties and their co-ordination and adjustment and adaptation, when they do appear? Were they latent in matter and force for an eternity before their activity? If so, what impulse first caused or started their activity? If not latent, whence came they? If eternally active, did they exist for an eternity in activity without co-ordination, adjustment and adaptation? If so, how came they ever to be co-ordinated, adjusted and adapted? If co-ordinated, adjusted and adapted, and active eternally, were they active in evolution? If so, why not this progression be perfected in an eternity? If co-ordinated, adjusted and adapted, but not active, what impulse started their first activity? If latent for an eternity, whether co-ordinated or not, there can be no spontaneity or self-activity in them, and evolution could not have its origin in them. If we assume spontaneity and self-activity of force to be inherent and eternal, as the origin and source of evolution, then this progression would be perfect. This is not the case, hence the progression can not be eternal, and had a beginning, and matter and force have not that spontaneity and activity that they must have to be the source or basis of an evolution. How could they be co-ordinated and adjusted and adapted, and not active? Then reason as we may, we have to concede the co-ordination, adjustment and adaptation of the essential properties and manifestations of matter and force in their primordial constitution. We can not conceive of matter and force as existing without these essential properties, and their co-ordination, adjustment and adaptation. We can not conceive of matter without its original elementary substances, or of force without its manifestations, in what are called the physical forces, and the co-ordination, adjustment and adaptation of all these. This adaptation, co-ordination and adjustment of the original elementary substances of matter, and of its essential properties, and of force and its original properties and manifestations, in their primordial constitution, are in an order, method and system, exhibiting design, purpose and plan, with prevision of, and provision for, all that afterwards appears, and are in accordance with law. The highest conceptions of reason, the most abstract ideas of reason, are realized in all these features of the primordial constitution of matter and force, and make of matter and force subordinate agents, the products of mind and manufactured articles. It establishes the pre-existence of mind anterior to matter and force, to give to them their primordial constitution. There are but two ways to avoid this conclusion. One is to deny co-ordination, adjustment and adaptation in the primordial constitution of matter and force. The one who does this bids adieu to all reason and common sense, and can not be reasoned with. He denies all reason, and the only basis for reason, and renders the very evolution for which he contends an utter impossibility; for if there be not this co-ordination, adjustment and adaptation in the primordial constitution of matter and force, all evolution, especially evolution in accordance with law and order, is utterly impossible. Or he must deny that co-ordination and adaptation into a system, exhibiting plan with prevision and provision, and in accordance with law, necessarily imply the pre-existence of mind as their only conceivable ground. If he does this, he denies all reason and common sense, and can be reasoned with no further. Then, accepting the axiom of the physicist, "Out of nothing, nothing comes," we are compelled to postulate mind as the only adequate ground for existence and being. Unless we do this, we are compelled to have life, sensation, instinct, reason, moral nature and character come out of what does not contain them, or have the highest existence of all being come out of nothing. The first constitution of things, the primordial constitution of matter and force, is such as to prove them to be subordinate agents, the products of mind, manufactured articles; and proves that they can not be self-existent, eternal, independent and self-sustaining, and proves that mind must have existed anterior to the first constitution of matter and force, as the ground of all being, the only eternal, self-existent, independent and self-sustaining being.

Let us now examine the star-dust assumption, or fire-mist theory, or nebular hypothesis. This hypothesis assumes that all space was once pervaded by matter in the form of highly heated gas or vapor. This assumption contradicts all experience, for actual experience knows of no solid that is the product of highly heated gaseous vapor. On the contrary, gases are produced from solids. The query arises, Was all absolute space originally pervaded by this fire-mist? If it was not, how was this repellant mass retained as a mass? Why not repulsion scatter it in space? If all space was pervaded by this fiery mass, how came it to cool? Whither was the heat radiated? If only a portion of absolute space was pervaded by it, and the heat was radiated off during an eternity, why was not the mass deprived of all heat during an eternity? How came the *nuclei* to be formed around which the fire-mist began to revolve? Whence came the different degrees of density that caused these *nuclei?* If it be said unequal degrees of heat, whence came the difference? Would not radiation through the mass preserve equal temperature? Why not these differences result in perfect results in an eternity or a perfect progression? Then were the essential properties of matter present in this fiery mass? Were the sixty elementary substances present in the mass, in a mixture? Whence came these essential properties of matter? Whence came these sixty elementary substances and their essential properties? Whence came force? Was it active in this mass? If so, why not produce its usual effects? Were the essential properties of force present in this mass? Were the essential manifestations of force present? Or was heat the only manifestation of force? Whence came the other modes or manifestations of force? The essential properties of matter are arranged, coordinated, in exact mathematical law. The elementary substances are adjusted in exact mathematical proportion and law. So are their essential properties. The various forces or manifestations of force are co-ordinated and adjusted in exact mathematical proportion and law. These proportions and laws realize some of the highest conceptions and most abstract ideas of reason. Whence came such realization of these highest ideas of reason? Materialism says, "Out of matter and force, without thought or reason." Reason and common sense say that these highest conceptions of pure reason, that tax the highest efforts of reason to apprehend them, must have had their origin in reason, and been realized by the action of reason.

The forces of matter are co-ordinated, adjusted and adapted as to when, where, and how long, and how often, in what order, to what extent, and with what force they will act. Chemical action is co-ordinated in like manner. Simple elements will unite with other simple elements in exact proportion. They will unite with certain elements and not with others. Different proportions give different substances, and in this way we have all of the almost innumerable compounds of nature, from sixty simple elements. All this is in exact mathematical proportion and law. It requires the highest exercise of reason to grasp it. These highest ideas of pure reason are realized in chemical action. Did they emanate from mere matter and force or from mind? In crystallization we have the most profound, exact, and beautiful forms of geometry, and its most abstract and ideal conceptions and laws realized. Is this the result of matter and force, or mind? Then in the forms of the heavenly bodies and of their orbits, in their distances, densities, motions, and velocities, we have the most exact and profound mathematical order, proportion, and law realized. Did blind, insensate matter and blind, irrational force realize these most profound and exalted conceptions of pure reason; or are they the result of the action of mind? If we return to an examination of the earth we observe in the masses of which it is composed things that are utterly incompatible with the idea that they are the result of blind, irrational force,of chemical action on the sixty original elements, and utterly incompatible with the idea that the mass of the earth resulted from the cooling of heated matter. There are mixtures of metals and substances that cool at vastly different temperatures. If we attempt to melt them, the easily melted substances are expelled long before the others are melted. How were they mixed as melted substances at first?

Some of these sixty elementary substances we now find in nature, united in useful compounds, with substances for which they have comparatively slight affinity, to the exclusion of others with which they have a far greater affinity, but with which they would form destructive compounds. Chlorine is united with sodium in a useful compound (salt), when it has a far greater affinity for hydrogen or nitrogen, and would form with them compounds destructive of life and organization. Nitrogen is found chiefly united in a mixture with oxygen in the air, when chemically it unites with chlorine so rapidly as to produce an explosion. Hydrogen is united with oxygen in water, when it has greater affinity for chlorine. How came these substances in useful compounds with oxygen, when they have far greater affinity for chlorine, with which they form destructive compounds? If these substances were once indiscriminately mixed in a gaseous, chaotic mixture, as the nebular hypothesis claims, or as is claimed by all theories that claim that the earth was once in a molten state; how came they to separate from substances for which they had so great affinity, and unite in useful compounds with substances for which they had but little affinity; or to reject substances in the mixture for which they had great affinity, but with which they would make compounds destructive of life and organization? Chemical affinity never did this, for it is an absolute violation of all chemical affinity. Mind acting on a plan, with prevision of, and making provision for, what follows, is the only reasonable explanation of this. Chemical affinity, uncontroled by mind, would have produced the opposite result, and is an utter absurdity as an explanation.

Another objection to this theory arises here: Was chemical affinity active during the molten state of the earth? Chemical union of many of these elementary substances, once supposed to be indiscriminately mingled in a chaotic mixture, is greatly accelerated by heat—the union of chlorine and nitrogen, for instance. Yet, in violation of all chemical affinity, intensified by heat, these substances, supposed to have been once mingled in a chaotic mixture, are not now united. Such a commingling in a heated, gaseous vapor is an utter impossibility.

The chemist, with the substances of the compounds in nature in a pure state, unmixed, with a knowledge of their exact proportions, can, after thousands of years of study, produce but few of them. How did the six elements of feldspar, one of the principal elements of what is called igneous rock, one of the most common substances of nature, separate from the rest in an indiscriminate mixture, for some of which they have a greater affinity than for any in the compound, and unite in a compound that all the skill and intelligence of man can not produce? Mica, another ingredient in igneous rock, has ten elements, the six of feldspar and four others. Horneblende has nine, the six of feldspar and three others. Now, how come these elements of different degrees of fusibility to unite in these three rocks? Since they melt at widely different degrees of heat, it is utterly impossible that the rock was formed in this manner. These sixty elements are near the surface together. They must have cooled at the same time, or those that cooled first and became solid would have gravitated toward the center. But since they cool at vastly different degrees of temperature, such cooling at once is impossible, and they never were in a melted state together, or they would not be placed as they are.

We find four very rare and volatile substances only in metalloids, with platinum, a rare metal, that volitilizes only with intense heat. Then, where was the water when the earth was cooling? Most rock could not crystallize without water, and yet how could water get into such rock in a melted condition, when it melts only at a temperature that would expel all water in superheated steam? And yet water is in these rocks in great quantities. The mass of the crust of the earth is granitic rock. It is made of three unique crystals always symmetrically united and arranged. Yet these are of different degrees of fusibility. They never united from a heated mass. If granitic rock be melted it destroys its present character. Then the rock that is specially called igneous, and forms the mass of granitic rock, never was in a heated condition.

Then evolution and cosmical development does not account for matter; nor for the elementary substances of matter; nor for the primordial constitution of matter in these elementary substances; nor for the essential properties of matter; nor for force, nor for the essential properties of force; nor for the essential manifestations of force. Evolution utterly fails to account for the co-ordination, adjustment and adaptation of these substances, properties, forces and manifestations, in an order, system and method, exhibiting design, plan, and purpose, with prevision of, and provision for, all that afterwards appears in the way of evolution, and all in accordance with law, expressing the highest conceptions of pure reason. Evolution fails to account for chemical action, compounds and crystallization, in accordance with the highest ideas of reason. There are useful compounds in opposition to affinity, that would have produced destructive compounds. These are intelligent results, above and in controvention of mere physical forces and matter and chemical action. Evolution especially fails to account for the realization of the highest conceptions of reason, in numbers, proportion, and geometrical form and law, in the primordial constitution of matter and force, and the elements of matter, and the properties of matter and force.

We have now only mechanical mixtures, mineral compounds, and chemical compounds, and inorganic matter. It is very common now for evolutionists to deny all separation between matter destitute of life, and matter endowed with life. They deny that there is any chasm between inorganic matter or matter destitute of vegetable organization, structure and life, and organic matter, or matter endowed with vegetable organization, structure and life. As this is a vital issue, let us be very explicit at this point. Observation has shown that all vegetable matter—in fact, all organic matter—is made up of cells. There is nothing in inorganic matter, matter destitute of vegetable life, that has the cellular structure of the vegetable cell. Here we establish an organic and radical difference an essential difference. Whence came this cellular structure? No chemistry or chemical action can produce the simplest vegetable cells. All cells are produced by structures, themselves composed of cells. Whence came the first structure or the first cell? In vegetable structures, there are sixteen of the simple elementary substances. Evolution supposes that these sixteen separated themselves from a turbulent chaos of indiscriminately mixed substances, sixty in number, or from chemical compounds made of them, and united in the vegetable structure, when most of them have greater affinity for other elements, not found in the vegetable cell, than for any in the cells, They separated in violation of chemical affinity, and united in disregard of chemical affinity, and yet chemical action is appealed to to account for vegetable structure and life. But even when these elements are united in a mixture, with all the skill that man's intelligence can suggest, there is no vegetable cell, or the slightest symptoms of one. The intelligent naturalist says that life, a vital principle or force, is wanted as an architect to build up or unite the elements in a cell. Right here we have a palpable case of arguing in a circle by the evolutionist. Ask him what this life, this vital force is, and he will tell you it is the one force pervading all nature, modified by the organization of matter into an organic structure. Ask him why the chemical union of the elements of the cell, in a mixture, does not produce the cell, and he says the architect, the force that builds the cell, is wanting. That is, the organization is produced by the vital force, and that vital force is the one force modified by organization. The force produces the organization, and the organization produces the force. There can be no cell without the force, and the force can not exist without the cell. A more complete instance of logical suicide never was seen.

Again, experience and inductive philosophy know nothing of vegetable structure except as developed from a seed composed of cells united in such germinal structure. Nor does it know any thing of a seed, except as produced by a vegetable structure similar to what is afterwards developed out of the seed. Whence, then, came the first seed of even the crudest and simplest vegetable structure? There is an attempt to bridge the chasm here by phrases, and by substances assumed to be both inorganic and organic or to contain elements of both; such as proteine, protoplasm, elementary life stuff. It is both a begging of the question and a hiding behind an ambiguous name for something that does not exist, and of which we have not the slighest knowledge. The crudest cellular structure, usually seen in certain fluids in vegetable or animal organisms, is called protoplasm or elementary life stuff. Out of it, it is claimed, is evolved all life, vegetable and animal. Can protoplasm be evolved by material forces or chemical action? Man can analyze protoplasm. He can mix the elements he finds in it. But his compound, which he calls proteine, is separated from protoplasm by the whole width of the chasm between death and life. There is neither cellular structure, nor life in it. It will destroy life, and decompose cellular structure. It will destroy protoplasm. Protoplasm of the vegetable can be produced only by organism of a vegetable. We nowhere find it in nature, except as the product of a vegetable structure. Material forces and chemistry never have produced it in human knowledge. Then protoplasm can lose its vital force and become dead protoplasm. It is chemically and organically what it was before, but there is no life, no growth in it. Chemistry can not even produce dead protoplasm; but if it produced protoplasm at all, it would be dead protoplasm. Protoplasms of different vegetable structures differ from each other, and one does not produce or unite with the others. Vegetable life does not spring from elementary protoplasm. It comes from cells united into a germ or seed. Nor does protoplasm ever come from inorganic matter, chemical action, or in any way except through a vegetable organism by living matter. Cells, with power of organization, growth, and reproduction, can not be produced out of crude protoplasm by any method whatever. They can be produced only by vegetable organizations, living structures. Then evolution can not account for protoplasm, nor for the simplest vegetable cell, nor for the simplest organization of them into a seed, nor for the simplest structure developed out of a seed.

Then evolution supposes that the sixteen elements found in vegetables, by chemical action, assume a cellular structure. This nature denies *in toto*. It assumes that these cells assume the organization seen in a seed, and out of the seed comes a plant. Nature denies all this. It knows of no seed except as produced by vegetable organization. Or it assumes that the cells assume the form of vegetable organization as seen in the plant, and that produces the seed. But nature denies this, for it knows of no plant except as developed out of seed. Just as evolution could not account for life without organism, and for organism without life, so it can not account for plant without a seed, nor for a seed without a plant. But not only are material forces unable to produce protoplasm cells and organization, but they are invariably absolutely destructive of them. Cells, protoplasm, seeds, organization, and life are possible only when a new force, an antagonistic force, conquers these forces, co-ordinates them, and renders them tributary, and resists and overcomes their destructive tendency continually, and subordinates them to the uses of the organization and life. When this vital force ceases to act and resist the destructive tendency of these physical forces, they soon decompose and destroy the organization and structure. Animals and plants die on the elements of protoplasm, or on any imitation of it man can make. Protoplasm alone goes no further than protoplasm. Animals and plants each appropriate out of nature the elements necessary, and manufacture their own protoplasm. Animal or plant protoplasms come only from animal or plant organisms. Whence came the animal or plant? The magic term protoplasm will not conjure them into existence, for it is produced only by animals or plants. No instance can be given of the production of an organism out of inorganic matter without cells, germ, or seed. Then protoplasm, cells, or even germs alone, do not produce the lowest form of animal or vegetable life. We have thus shown that there is a chasm between inorganic matter and organic matter, between vegetable organization, and mere mineral or chemical organization, between matter destitute of vegetable organization, growth and life and matter with vegetable organization, growth and life, as wide and as impassable as that which yawned between the rich man and Lazarus. No evolution, no convenient phrases, no manufacture of convenient, unknown substances can bridge it over. We can show that physical forces can not produce the basis of life—that the basis of life can not evolve life. Not only so, but that they are destructive of the basis of life and of the organization in which life alone can exist, and of life itself. If this is not establishing a chasm between inorganic and organic matter, and an impassable one, it can not be done.

Evolutionists claim that there is no chasm between animal and vegetable life and organization. But, unfortunately for them, the microscope declares that animal and vegetable cells and protoplasm are radically different. Bastian's experiments with the microscope show that vegetable and animals cells are radically different in cellular structure. So is the cellular structure of animal and vegetable germs. The conditions necessary to the development and growth of one destroy the other. Animal life is sustained by the destruction of vegetable matter and life. Then the cells, germs, and structures differ in cellular structure, means of sustenance, and growth. Animal or vegetable protoplasm is not necessary for animal growth or sustenance. Nor is vegetable protoplasm necessary for vegetable life or sustenance. Vegetables attack, disintegrate and appropriate inorganic matter. Animals use, in similar manner, vegetables. Thus the vegetable prepares the inorganic matter for the higher, the animal. But animal protoplasm, or cell, or organism, or life, can not be evolved out of the vegetable, or out of inorganic matter, by any vegetable form or process, or chemical or physical force. Animal protoplasm, cells and germs are produced only by animal organization, by appropriating and assimilating vegetable matter. There is a chasm between vegetable and animal nature. No sophistry and convenient phrases, or assumptions or singular analogies, can bridge it over.

Evolution utterly fails to account for animal life, growth and reproduction. There are sixteen elements in animal organizations. Evolution supposes that these sixteen substances separated themselves from sixty others in a mass, in which they were indiscriminately mixed, or from chemical compounds, when they had in most cases a greater affinity for elements not in the animal compound than for any in it, and that this was performed in such a manner, as to obey exact mathematical law and proportion, so as to form the cell or germ. It supposes that mechanical or chemical forces did this. One series of sixteen separated and united thus in vegetable compounds—and vegetables were thus evolved first, and prepared and adapted for the sustenance of animal life; and then, another series of sixteen elements, in different proportions, separated from other elements and united in animal organizations. All this was accomplished by the aimless, purposeless workings of blind, irrational force and blind, insensate matter, or animal life, organization and growth were evolved by vegetables. This supposition we have already sufficiently disproved. Then evolution utterly fails to account for animal life, organization, growth, sustenance, and reproduction. Indeed, these existences and phenomena arise and exhibit characteristics in direct contradiction to the theory of evolution.

Sensation can not be evolved out of matter destitute of sensation. There is an impassable chasm between organic matter possessing sensation on the one side, and organic matter destitute of sensation and inorganic matter on the other. The evolutionist either denies any such chasm, in the face of all experience, observation, and sense, or ignores it in his reasoning, or assumes that matter and force have leaped this chasm, although he can not give a single instance of such a leap. Evolution utterly fails to account for the origin of instinct, so varied and wonderful, with such wonderful displays of intelligence. There are animals of the lowest grade of intelligence that perform acts that display a knowledge of some of the most profound problems in mechanics, the arts, in chemistry, and other sciences. The bee builds a cell that displays the most profound architectural and geometrical knowledge and skill, in securing strength of structure and economy of space. Do unintelligent physical forces secure so wonderful an intellectual result? Does the atom of brain of the bee secure so wonderful an intellectual result? It is absurd to take either position. There must be an intelligence above the bee, that has given to the bee the instinct that blindly secures this result. Whence came the instinct, the instrument so wonderful in its character, and where is the intelligence that solved the problem it so unerringly works out?

Multiplied instances might be given, where, in obtaining food, providing shelter, evading danger, and in other particulars, instinct exhibits a wonderful obedience to the most profound problems of mathematics, mechanics, chemistry, natural history, and other sciences. The intelligence is not in the insect or animal. The instinct does not solve the problem, or acquire this wonderful knowledge, yet there is an intelligence that solved the problem and had this knowledge, and such intelligence must have given the instinct that so wonderfully and unerringly acts as the instrument of this knowledge. It is not in the animal or the instinct. Is it in the unintelligent forces of nature? Did they accomplish so wonderful an intellectual result? Evolution is utterly impotent to account for the intelligence or the instinct, the wonderful instrument of the intelligence.

Evolution can not account for reason and its results as seen in man—self-consciousness, and rational intuitions of causation, infinity in space and time and being and causation, power of reasoning and demonstration, moral conceptions of conscience, moral desert, right and wrong, and retribution, religious intuitions of God, creation, government, providence and retribution. No stretch of the evolution hypothesis can give a shadow of suggestion of the origin of these phenomena, the highest phenomena in nature. There is a chasm between the most highly organized animal and man that no evolution can leap or bridge over. Man's brain capacity is, taken on an average of all mankind, over eighty cubic inches. The most highly organized ape has a brain capacity of only thirty-two cubic inches, although possessing a larger organization than man; or man's brain capacity is over two and a half times that of the most highly organized ape. If we compare the frontal brain, or reasoning, moral and religious faculties, the ratio is ten to one. Indeed, in the moral and religious faculties there is no comparison, for the animal is destitute of them. It is destitute of the catholic intuitions of reason, and of all power to evolve them; also of all power of abstract reasoning; utterly destitute of all moral and religious intuitions and all power to evolve them. No amount of conditions, or change of conditions, or instruction, can impart to an animal one of the distinctive characteristics of man, or evolve them out of his nature. The brute is destitute of all power of self-development. It is utter nonsense to talk of self-development of man's rational, moral and religious nature, or of conditions or influences of physical force and matter evolving them, out of the animal. No amount of degradation can strip man of this rational, moral, and religious nature, and especially this power of self-development and progress, or reduce him to the brute. Here is a chasm no evolution can leap or bridge. In its presence evolution is dumb. Wallace and Huxley admit this, and even ridicule the idea of man's being a development from lower orders of animals.

We have, in our examination of evolution, thus far shown that it is utterly impotent to account for matter and force, for the essential properties of matter and force, for the sixty original elements of matter, and the different manifestations of force, for the distinctive characteristics of each element and each force, for the co-ordination, adjustment, and adaptation of all these, in a system exhibiting design, plan, prevision of, and provision for, all that afterwards appeared, in accordance with law, all expressing and realizing the highest ideas of reason. It can not account for chemical action or crystallization, nor for the vegetable cell or germ, seed, life, or plant; nor for the animal, cell, germ, life, or organization. It can not account for the organization, growth, and reproduction of either. It can not account for sensation, instinct, understanding, reason, volition, moral and religious nature and intuitions. It can not account for the simplest cell of the crudest protoplasm of which it says so much, much less the infinitely higher developments of nature, immeasurably above it.

We will now call attention to another radical defect in evolution. Its fundamental axiom is, "Out of nothing, nothing comes." Now, all life, all possibilities of life, all basis of life, sensation, instinct, reason, and moral and religious nature, were in the original star-dust or fire-mist, or they were not. To say that they were present, in any sense, in chaotic fire-mist, destitute of even the essential properties of matter and force, or at least destitute of all co-ordination and adaptation, is simply an insult to all common sense. Take the most wonderful piece of inorganic matter in the universe, no matter how wonderful and beautiful its chemical organization and properties, and ask reason and common sense, if you dare, if there is in it latent life, sensation, instinct, reason, and moral and religious nature; if the life, intellect, spiritual nature, and capacities of a Milton are latent in it. They are not present in inorganic matter, either latently or potentially. Then, to say that they are evolved out of what does not contain them, is a violation of the axiom, for it evolves the most wonderful being in the universe out of what does not contain it, or the most wonderful being in the universe out of nothing. Not only so, but it makes the purposeless, aimless workings of blind, insensate matter and blind, irrational force evolve what is not in themselves, and what is infinitely above them. It makes nothing create the infinite. In infinite mind alone is life, sensation, and reason, and infinite mind alone furnishes sufficient ground for them. But in matter and force there is no ground or rational basis for a surmise of them.

But suppose we concede, in violation of all common sense, that there are latent nascent plastic life, sensation, instinct, reason, and moral and religious nature in fire-mist, in chemical compounds, in inorganic matter, waiting for evolution, whence comes this wonderful evolution? What are the means of this wonderful evolution? Is it the organization of matter? Whence come this wonderful organization of matter? How came matter to be so wonderfully organized? Evolution can only say it is the result of the action of force; and when challenged to account for so wonderful a manifestation of force, it tells us, in turn, that this wonderful manifestation of force was caused by its own effect, the wonderful organization of matter. It is like the clown who believed what the church believed, and the church believed what he believed, and he and the church both believed the same thing. There is just as much explanation of the phenomena of being in evolution as there was explanation of what the clown believed, and no more. Wonderful organization of matter caused the wonderful manifestation of force, and the wonderful manifestation of force caused the wonderful organization of matter, and they both caused each other. Each cause is the effect of its effect, and each effect is the cause of its cause. In thus assuming that all life, reason, and moral and religious nature have been eternally potentially present in matter, as did Tyndall in his Belfast speech, the evolutionist makes a god, an infinite fetich, out of matter, and gives to it all that he refuses to accept in Infinite Mind; and does this in violation of all reason, which declares that matter has not these existences in it, and that mind is the only possible ground for them. Reason will demand, whence came life, sensation, instinct, reason, moral and religious nature? Were they in star-dust? It is an insult to common sense to say so. If not in it, they could not be evolved out of it, for out of nothing, nothing comes. If added to it, from whence, and by what? If you say conditions, it is but a phrase to cover ignorance, for conditions create or cause nothing. They may modify, but they can not create. They permit that to exist which has a being from an adequate cause, but they cause nothing.

As a sort of review of our reasoning so far, we will call attention to a fundamental fallacy pervading the entire process of reasoning of the physicist. When he meets with one of these objections to his hypothesis, or failures in his explanation, instead of meeting them frankly he invariably evades them. It is done in various ways. A favorite artifice is to direct attention from the phenomenon that he is challenged to explain, to another which he claims is just like it. He explains the second, and then claims, since they are similar, he has explained the first. A careful examination will show that, by the change, he has evaded the very point at issue, and his examination of the second phenomenon never touched the point at issue. Another favorite evasion is to substitute something else for the real issue, and cut down the man of straw of his own construction, and leave the issue untouched. Another is to spend a great deal of time over minor points that need no explanation, and by a multitude of words over them, obscure the real issue, and claim that he has explained the difficulty, when he has only hid it out of sight in his verbiage. Another is to boldly assume all the real difficulties in the problem, and then talk of what needs no explanation. Darwin does this in his hypothesis. Another is to cover up failures by high-sounding phrases, or to offer high-sounding, swelling phrases as explanations; such as conditions, natural selection, survival of fittest, and heterogeneity and homogeneity. At best they are but names for the results of a process, and contain not a shadow of explanation of the process. Another is to re-state the difficulty in such a way as to leave out all that is vital and difficult, and then display great skill in answering what was not presented. Another is to state the objection or difficulty in such a way as to caricature it or render it absurd, and then ridicule it, or call it some fearful name, such as anthropomorphism. If the one investigating these speculations will resolutely hold before his mind the real demands of the problem, and strip the efforts of the evolutionist of the above evasions, there will be no difficulty in seeing at a glance the utter shallowness of all these speculations.

Evolution can not account for the various species of animals and plants. We need not examine the various theories of evolutionists to account for the genesis of species. We need only examine the hypothesis of Darwin; for it is now the main, and, in fact, almost the sole reliance of the evolutionist to account for the origin of species, and in reviewing it we present a review of the main features of the others. We shall compare this speculation with the demands of the problem, and test its sufficiency to solve the problem. We are troubled, not with scarcity of objections and arguments, but with the mass of materials to be used. A lawyer was once employed to defend a man who was charged with borrowing a kettle and refusing to return it. He announced that he expected to prove: 1. That the plaintiff never had a kettle. 2. That the defendant never borrowed his kettle. 3. That he had already returned the kettle. 4. He had paid for the kettle. 5. The kettle was worthless, and there was no loss to the plaintiff. As strong a case can be truthfully made out against Darwin's hypothesis. Our first objection is, that it is at best but an hypothesis, a mere guess. No one, when challenged directly, can claim more than this for it, although practically evolutionists use it as fundamental, demonstrated truth. They boldly ask us to cast overboard the intuitions of our nature and faith, and cherished views of years, for this mere guess. The best answer to be made to so arrogant and impudent a claim is to ask, Is Darwin's hypothesis more than a hypothesis—a mere guess? But we are told it will account for the phenomena, and therefore we ought to accept it.

We shall show, before we are done, that it will not account for a single one. But even if a hypothesis will account for the phenomena, we are not bound to accept it, much less risk priceless interests on it. No one has given a satisfactory explanation of the phenomena of the aurora borealis. The Indian says that it is the spirits of his ancestors, dancing in the happy hunting-grounds, and that they are luminous. This hypothesis will explain all the phenomena, and yet who will accept it? It is as plausible and rational as Darwin's hypothesis. Here we might stop. When we have said that it is at best a guess, we have banished it from the realms of scientific reasoning. It can be made the basis of not even the simplest scientific statement. A lawyer once informed the court that he had twelve reasons why he could not produce a certain witness: 1. He is dead. "That will do," said the judge, "you need not give the other eleven reasons." So when we have stated that its advocates can only claim that it is a guess, we might dismiss it without further thought.

Another objection that we urge is the use that is now being made of it. It is brought forward as *the* explanation of the origin of life and species and all varieties of animal and vegetable life. When assailed and disproved, the evolutionist coolly tells you it is a mere hypothesis, and he claims no more for it. Ask him a moment after, how, in his theory of atheistic evolution, he accounts for life, species, and varieties, and he will give you Darwin's theory as coolly as though it were not disproved, and as though he had not abandoned it. I know of one prominent infidel champion who lectures on it, and offers it as a scientific solution of life and species; and yet, when challenged to affirm it in discussion, he backs down, and says no one claims that it is more than mere hypothesis. The force of this objection is rendered overwhelming when we consider that the hypothesis assumes the difficulties of evolution. It quietly assumes them as a basis of the hypothesis. It is silent concerning the origin of matter and force; the original elements of matter; the essential properties of matter; the origin of physical forces; the essential properties and manifestations of these forces; their co-ordination; the primordial constitution of matter and force; chemical compounds and crystallization. It has not a word on that insoluble enigma the origin of life, and, strange to say, evolutionists use it for this very purpose. Darwin makes no attempt to account for the origin of life. He assumes it. He makes no attempt to account for the primordial germ. He assumes its existence. He makes no attempt to account for its properties of organization, growth, and reproduction. He assumes all these. He makes no atempt to account for the different conditions he supposes surround his primordial germ. He assumes them as influencing these germs. He makes no attempt to account for the adaptation to different conditions, or for the power of adaptation to different conditions in the germs. He assumes all this wonderful adaptation, or the power of adaptation. He assumes that conditions produce new characteristics, when they are not causes at all. They may permit what already exists to continue, but they create nothing. In all this we have, step by step, an assumption of the whole problem. He assumes the law of heredity that preserves these new characteristics. Conditions produce new characteristics in violation of the law of heredity, and then the law of heredity proves too strong for the conditions, and preserves these new characteristics. The law of heredity is like the Irishman's aim at the calf. He aimed so as to hit if it was a deer, and miss if it was a calf. So the law of heredity misses the old characteristics, but always hits the new ones.

Before we can accept Darwin's hypothesis as even a working hypothesis, we must assume the following things as facts. If either be disproved, the hypothesis is worthless.

I. All elementary substances must be convertible or identical, to render possible the almost infinite variations that his theory claims. Chemistry utterly denies this. A chemist would laugh at as an absurdity, the claim that iron can be transmuted into gold. Darwinism sustains about the same relation to biology, that alchemy did to chemistry, and it will take its place with alchemy and astrology.

II. These different conditions must always give improvements. The variations must always be in one direction, from simple to complex, from lower to higher, from useless to useful.

III. The change must be continually and infinitely in that direction. The changes must be limitless and infinite, continually in an upward direction.

IV. Variations must give greater capacity for struggle for life, greater power to survive.

V. Or there must be something in nature that conserves and preserves the fittest, the highest, the complex, the useful, the beautiful.

VI. That at some time in the development, there must be produced out of what had no sex that which had sex.

VII. That there be produced at the same time, and in the same place, two of opposite sexes, out of what had no sex, and that they unite only with each other in sexual intercourse.

VIII. That whenever an improvement occurs, there be produced two of opposite sexes, in the same place, and at the same time, having the same improvements, and that they and their posterity unite only with those having this improvement. In no other way could the law of heredity preserve improvements.

IX. Or that in each case in the case of the introduction of sex, and in the case of every new improvement, vast numbers be produced, and they and their descendants unite with each other, or those having these improvements.

X. One or the other of these alternatives would have to occur an almost infinite number of times during the course of development. It would have to occur in each improvement, in each species, and variation. How could this happen without the oversight and control of intelligence?

XI. There must be given an almost illimitable time for this evolution. The time is so long, and the change so imperceptible, as to be practically beyond human knowledge or experience.

XII. Lastly, that there be a co-ordination and adjustment of conditions, and a correlation of variations, during this almost infinite time, to secure the continual and continued ascent in one direction. Such are the demands of this hypothesis. As we have repeatedly urged, it assumes all that is vital, and assumes all the difficulties, and all that especially needs explanation.

Let us now examine these wonderful germs. All life and possibilities of life must have been in each germ, or different manifestations of life in different germs. If different manifestations of life in different germs, whence came the difference? Then suitable conditions must have surrounded each germ, or there was power in each germ to adapt itself to conditions. Whence came this adaptation to conditions, or this power of adaptation to conditions? If the same life, but adaptability to all conditions, existed in each germ, and all possibilities of life, whence came this wonderful adaptability, and these wonderful possibilities? If the same life and conditions in each germ, whence came the difference of development? All life, all possibilities of life, and all conditions, must have existed in and around each germ, and adaptation to all conditions. Also conditions, adaptations and possibilities, so that at the same time, and in the same place, may be evolved out of what has no sex, and yet contains what has sex, two of opposite sexes. And as often as conditions evolve an improvement, two of opposite sexes must be evolved possessing the same improvement, and this must be repeated as often as there is an improvement evolved. These must associate with each other, and so must their posterity. Such a number of such coincidences, as must have occurred in the course of evolution of all animals and plants during the countless ages required by evolution, are inconceivable. Again, when it is said that conditions produce the variations, things are assumed to be causes that have not one particle of causal efficiency in them. The thing varied must exist. Conditions do not create it. The capacity to vary must exist. Conditions do not create it. The conditions do not cause the variations. They merely permit the variations to be made. There is no causal efficiency in the conditions to which Darwinism appeals, as the cause of all variations. Survival of the fittest is not a cause. It expresses the result of a cause, and not a cause. It expresses the result of a process, and is not a factor in the process. It is a result co-ordinated with certain physical conditions. Conditions are not efficient causes. They can, at most, be but instrumental causes. They permit causes to act, but are not causes themselves.

Another objection can be made to the use made of physical forces in the theory of evolution. Physical forces are constant, definite quantities. They can produce but one constant result. Should the same force operate throughout eternity, it can produce no different result, and no more than at first. Evolution is a progressively varying, and an increasingly varying result, and it varies also in the nature of the result. New and higher nature is supposed to be evolved all the time. How can a constant and fixed quantity produce an increasingly and progressively varying result, and one changing in nature all the time? In the case of man, we can see how he can produce greater results as he increases in power. We can see also how he can produce results differing in nature, as he acquires different power. But we can not predicate the same of forces or causes constant in quantity and unchanging in nature. Here is a fatal defect in the theory of evolution. It ascribes progressively and increasingly varying results, that are constantly changing in nature, to constant fixed quantities, whose nature ever remains the same. Again, physical causes produce movements in cycles, as the course of water in the ocean, the vapor, the cloud, the rain, and the ocean again. They never produce an indefinite ascending progression, for this would be to violate the physicist's maxim, for it makes them evolve what was not in them, both in quantity and quality. The attempt to evade this, by assuming cycles in evolution of the universe, is a preposterous assumption, for which there is not one particle of proof. Again, the objection would remain valid within that cycle, that it makes constant quantities produce increasing and different results.

Darwin's hypothesis will merely account for the survival of new characteristics when produced. They survived because conditions favored such survival. This is no explanation of what caused the new characteristics. The theory shows that conditions preserved the work of the causes, but does not give a hint of the causes. Then the results are so varied, so contradictory, and so inexplicable often, that Darwin himself confesses that but little stress can be laid on conditions of life to account for variations. When he confesses this he yields the whole theory; for the gist of the theory is, that conditions have produced all varieties of animal and vegetable life. Reason demands what power raised the plant from inorganic matter, the animal from the plant, and man from the animal. Whence came organization, sensation, instinct and reason? Were they in the fire-mist, or added? If you say in the fire-mist, you insult common sense. If you say added, reason asks whence and by whom? If you say conditions evolved them, you cover up ignorance or evasion, by a convenient phrase. Conditions may modify, but they can not create. The evolutionist often covers up his failures by convenient expressions, and endeavors to cheat us by sonorous phrases. He talks much of the "laws of nature" and "the nature of things." We are told that the laws of nature produced certain results, and that they are the result of the nature of things. No doubt things have a nature, and doubtless all are in accordance with law. But when the evolutionist talks about the laws of nature, giving existence to that nature in which they inhere, and without the existence of which they could not exist, or of the nature of things giving a nature to things, he confounds cause and effect. We might as well talk of a man's conduct giving him an existence.

The same vagueness pervades Darwin's entire use of the terms—natural selection, sexual selection. They are merely results and not causes. They are results in a process, and not factors in the process. If Darwin were to be compelled to define these terms, and to state definitely what he could attribute to them, he would be compelled to exclude the greater part of what he now attributes to them, and certainly all the important part. Let the evolutionist be compelled to define clearly what he means by these terms, and state definitely what he can attribute to them, and nine-tenths of what he attempts to cover up by them, and a still larger proportion of what he attempts to account for by means of them, would be removed out of their reach.

Another juggle with words is found in the terms creation by law, and creative law, now so constantly on the tongue of the evolutionist. If these expressions merely mean that creation was in accordance with law, in accordance with reason, will, and the attributes of the Divine mind, no one will object. But if they mean that the *law* creates, we ask, "Is law a force, a creative power?" Law is merely the manner in which the force acts. Creative law merely means the manner in which creative power was exercised. Then we would ask the evolutionist, who is so continually parading creative law, and creation by law, as the solution of all things, Is the law that which creates, or is it merely the manner in which the creative power acts? If used in the former sense, it is the veriest jugglery with words. If in the latter, there is no cause of creation, no explanation of the cause of creation in it. A most palpable illustration of this jugglery with words is found in Wallace's attempt to account for the fertilization of certain plants by insects who carry the pollen from one sex to the other. There are such evidences of design in the whole process, especially in the gins, traps, and springs in the plant, to compel the insect to do the work, that design by creative intelligence is the first thought by every mind. Wallace asks, why not creation by law or creative law produce such a result without a direct act of creative intelligence? We reply by asking, How can an order of acting, or an order in which the forces of nature act, produce any thing? Above all, how can an order of acting produce a different order of acting, as he supposes in this case, and especially one so new, so different, and so opposed to the former order which is supposed to produce it? All talk about creation by law, or of creative law, in the sense of law being the efficient cause of creation, is nonsense, for law is merely the manner in which creative force acts; and a manner of acting can not prodnce a different manner of acting, or that which acts in a different manner.

Then that which creates must be something different from the law, for that only expresses how that which creates acts. We must either assume that matter and force have creative energy, or that it is back of, and above matter and force, and acts on and through them. We have already repeatedly shown that the first assumption is absurd; but even if we concede that matter and force have creative energy controlled by law, whence came this creative energy, and whence came this wonderful law that rules it. The highest conceptions of reason are realized in this energy and in the law that controls its action. Who made this law, for law is but the expression of the reason and will of mind? When we speak of the laws of nature, reason demands who made the laws? The term law, necessitates the existence of mind, of whose reason and will the law is an expression. In asserting direct creation by intelligence, we do not affirm incessant interference, nor set to one side the regulative influence of law in creation. God creates, and in a course of development, but is ever present in the development, and acts in accordance with law, the highest law—law of infinite reason. We admit that law includes the universe in its domain, but the question is, What kind of law? Is it a law of blind, fatal necessity, as an application of the term law to the ongoings of mere matter and force would imply? Or is it a law of rational action, a law of intelligence? In prayer and providence there is law, a law of rational intelligence. Invariableness of law, when used in a rational sense, does not preclude the idea of purpose and will. On the contrary, it is necessary to render the forces controlled by this law susceptible of being used by intelligence and will, for it renders certain the result. Laws of nature are rendered subservient to the purposes of mind and will by varying the conditions, and using other laws and mechanical appliances. Man does this, and in this way renders subservient to his purposes this invariability. The same thing is done all through nature. The greatest strength of material, with the greatest lightness is secured in the hollow tubular bone of the bird, as in the tubular bridge, or hollow columns. Intelligence used the laws of nature to render subservient to purpose other laws of nature.

Another fundamental objection to evolution and Darwinism is, that they violate all inductive philosophy. They do not investigate the wonderful and unique domain of rational, moral, religious and spiritual phenomena, and reason from the phenomena to the cause. The evolutionist either refuses to recognize the existence of such a domain of phenomena, or refuses to investigate; or he assumes, in violation of all sense, that they are identical with physical phenomena; or, in violation of all reason, he applies to them the results and reasonings of the physical world, so radically different. Nature is used in the narrow and low sense of mere physical nature alone. In investigating nature we have man's rational, moral, religious and spiritual nature and ideas, and all they suggest, as the highest element of nature and means in investigation. The evolutionist usually denies will and even spontaneity in nature, even in man himself. Tyndall did this in one of his lectures. There was no spontaneity in the lecturer, in his choice of subject, in his choice of materials for experiments, in his choice of words to express his thoughts. Closely allied to this is the objection that Darwinism and evolution ignore entirely all religion, morality and reason, all moral, mental and religious causation. The only conditions they recognize are physical conditions. They overlook reason, morality and religion as factors in evolution, and the highest factors. Spencer's system of evolution is defective in this particular. He overlooks entirely all intelligent data and factors of evolution; or he overlooks the difference between them and unintelligent factors. He tacitly attributes all to unintelligent factors. His external and internal factors of evolution are not even forces but the way in which forces act. Homogeneity, heterogeneity, integration and differentiation are not forces or causes, but terms expressing how forces and causes act. He attempts to cover the nakedness of his system with these words of amazing length and thundering sound, and to cheat his reader into a belief that he has given an explanation and a cause for the evolution, as Martinus Scribblerus accounted for the roasting jack's roasting meat: "It roasted meat in consequence of an inherent meat-roasting property of the jack"!

Another objection is that physical science can not settle the question of absolute creation. Physical science can only settle questions concerning phenomena that it observes, and can investigate. Absolute creation is a phenomenon that has never come within the observation of physical science. It has only observed derivative creation through reproduction. It can only investigate the phenomena of nature and learn their characteristics. In doing this it must use the fundamental principles of reason, as its basis and guide; and when it has placed before reason the phenomena and characteristics it has accomplished its work. Reason must, from the nature and characteristics of the phenomena, settle the question of absolute creation. The question of absolute creation must be settled by reason and religion; by the rational and religious portion of man's nature. It is conceding to physical science what is utterly out of its province, to concede to it, the power to settle the question of absolute creation. Physical science can investigate the stomach of the murdered man, and detect poison; but the question of who placed it there and the character of the act form no part of the province of physical science. Let physical science go on revealing phenomena and their characteristics, but reason must decide from what is thus furnished to it their cause and the character of the cause.

Most all the objections that the evolutionist urges to the idea of creation are the results of derivative creation, and not of absolute creation. The perversions of animals and forces of nature by man and the infelicities seen in nature, are a part of derivative creation, and not of absolute creation. They result often from the abuse of the freedom given to man, and are necessary to such a state of freedom. Belief in God's creative energy and action does not rest on physical grounds. It can not be tested by them, or disproved by them. It rests on primary intuitions of the reason. Physical facts can not disprove these intuitions or the belief resting on them, for they do not rest on physical facts. Physical facts can not test them. Physical science can decide the qualities of the parts or the whole, but it can not test or disprove the axiom that the sum of the parts equals the whole. Belief in God's creative energy and action no more rests on physical grounds than the above axiom rests on the nature of the parts or the whole. When we call the attention of the evolutionist to the wonderful character of the course of evolution, he attempts to evade it by calling attention to the wonderful character of the process of reproduction,—the evolution or development of man out of a microscopic animalcula that unites with a mere speck of albuminous matter. But the cases are not analogous. The evolution of a new species is a hypothesis of something of which no one has had any experience, in any age in a single instance. The other is a fact of daily experience in thousands of cases for thousands of years. In one case all that is evolved is in the germ, however minute, and we know the result has been evolved out of it. In the other we have no knowledge that the result was potentially in the beginning. It can not be proved to be there, and it is an insult to common sense to say it is there. We have no experience of its being evolved out of the starting point, and know nothing of the process, not even its mode of acting.

We now reiterate a thought already suggested. We can not allow the words "science," "practical science," "practical knowledge," and "verification," to be narrowed and perverted until destroyed. We can not allow the rational part of our nature to be discarded, nor permit the fundamental intuitions and ideas of our nature to be ignored and cast to one side, or sneered out of existence as metaphysics. The regulative ideas and principles of all departments of science, thought, and investigation are metaphysical, are metaphysical conceptions above and beyond all mere phenomena. We can not think or reason on phenomena, or classify them, or take one step in science without them. Metaphysical ideas or intuitions impel us to investigate phenomena. Metaphysical ideas or conceptions are our sole means of determining their characteristics. Metaphysical conceptions enable us to generalize and classify them. The physicist generalizes his phenomena, and classifies them in accordance with ideal conceptions. He can not investigate without basing his investigations on ideal conceptions. His examination of phenomena is conducted by metaphysical analysis. All his comparisons, deductions, anticipations, speculations, and reasonings are metaphysical. Lewes admits this, and says that science is compelled to classify, arrange, and co-ordinate all facts into a general system by means of ideal concepts. He calls this necessity an infirmity of the mind. In so doing he perverts reason to dethrone reason. The infirmity is in the perversion of reason that rejects this catholic tendency of the mind to save a system of speculation. The same perversion of reason is seen in the attempt to cast to one side all the regulative ideas of reason that have been recognized for thousands of years. Phenomena are stripped of all connecting links of thought, all correlating ideas of reason. Science is rendered impossible, and philosophy a chimera. It is impossible for man to move one step in scientific investigation without the rational ideas of plan, system, method, law, adaptation, co-ordination, design, prevision and provision. Back of all ideas of force and phenomena, lie the ideas of co-ordination, adjustment and adaptation of them, for what follows. When a man goes so far as to relegate all ideas of force, and every thing connected with it, except numerical relations, and finally even numbers themselves, to metaphysics, and then claim that they are no part of real science or practical knowledge, he has abdicated all use of reason, and stripped reason of the only means it possesses of working. We can not allow a vast atrocious system of the most abstruse and abstract metaphysical reasoning to tear down all metaphysical conceptions, and then commit suicide by destroying metaphysics, to cap the climax of absurdity. No reasoning is so metaphysical as that of these physicists, who so denounce metaphysics. It is the worst kind of metaphysics, and the most perverted.

Another objection to the speculations of the evolutionist is his absurd denial of all teleology in the processes of nature. From the time the first mind observed the phenomena of nature, until the present, every rational mind, except a few like the evolutionist, who abdicate all reason, has recognized order, co-ordination, adjustment and adaptation in the constitution, processes and phenomena of nature, exhibiting purpose, design and plan, with system and method, showing prevision of, and provision for, all that occurs, all governed by law expressing the highest conceptions of reason. To evade the inevitable conclusion that all these have their necessary and only conceivable ground in mind, and the only legitimate conclusion that there is an intelligent Creator, the evolutionist denies all teleology in nature. There is but one parallel case of as mad negation of reason in history. Pyrrho of Elæa denied that there was any thing real in existence, and carried his madness so far that his friends had to keep guard over him to save his life. He would have walked over a precipice, saying it was merely imaginary. Just as his imaginary precipice would have broken his real neck, so the denial of teleology, by the physicist, breaks his mental neck, and renders him incapable of reasoning, or being reasoned with. Theism and common sense say an organ exists in certain conditions, because it was made for the conditions, and adapted to them. Darwinism says that *somehow* an organ exists in certain conditions, because out of many it was *somehow* able to persist in the conditions, in which it *somehow* happened to be. Teleology and common sense say every organ and function is a rifle bullet, fired by intelligence at a mark, the end designed, or purpose for which the organ or function was planned. Experience says that it hit the mark every time, as infinite intelligence would certainly do. Darwinism says each organ and function is a grapeshot, and one of an infinite series of volleys of grapeshot, fired somehow, no one knows how, at no object whatever, for there is no design or purpose in nature, and one after another in the infinite series happened, *somehow*, one don't know how, to hit something, and *somehow*, we don't know how, results were produced, and *somehow*, we don't know how, these results were connected in ascending series, that *somehow*, we don't know how, ascends from lower to higher, from simple to complex, and from useless to useful. Darwinism may deny the above statement, but it is perfectly correct, unless it recognizes teleology or design in nature. Common sense will inquire: Why was there any thing to be fired? Why was it fired? How came it to hit something? Why was there something for it to hit? What was that something hit? Why does hitting that something produce an effect, especially in the direction of improvement? Why do any, i-the infinite series, hit the same something? Why produce the same effect? Above all, why produce an increasingly varying effect? Why are the effects so related in kind and order and succession, as to produce an ascending series, from lower to higher, from simple to complex, from useless to useful? Why are the results perpetuated and co-ordinated? Darwinism says that the most wonderful, intricate and complex apparatus was thoroughly adapted to the most wonderful ends by trial and failure, by unintelligent forces. Or, rather, the most wonderful apparatus, thoroughly adapted, was produced without trial or purpose, by the aimless and purposeless fortuitous workings, defective workings of blind, insensate matter and blind, irrational force? Common sense asks: Do blind forces ever try? Can any thing result where there is no trial to do any thing? Do blind forces correct defects, errors, or failures? Could they improve? Could they retain improvements?

The utter absurdity and fatuity of attempting to deny teleology in nature, is seen in the continual use that Darwin and other evolutionists are compelled to make of teleological terms, in describing nature and the processes of nature. The evolutionist can not describe a single organ, function or process of nature without using teleological terms. In Darwin's descriptions of animals and plants, he continually speaks of "admirable contrivances," "wonderful design," "admirable machines," of "gins," "traps," "spring guns," and "machines," and exhausts the teleological vocabulary, and then assures us that he fails to express all that he observes. Take the case of certain flowers, the orchids of Madagascar. They are fertilized only by certain moths, that carry on their bodies the pollen from one sex to the other. There are most admirable contrivances for luring the moth into the nectary of the plant. Then there are admirably contrived spring guns that project the pollen on the moth. Then the nectaries of these orchids are remarkably long, and the moths have a correspondingly long proboscis. Reason asks, how came these orchids with these remarkably long nectaries? Above all, how came the moths to have proboscises corresponding with the nectary? How came the orchids to be dependent on such an almost unimaginable contrivance for fertilization? Evolution says certain flowers *happened* to have unusually long nectaries; and moths, in striving to reach into the nectaries, elongated their proboscises, and flowers and moths continued this process in one direction until we have these results. It has no answer for the query, How came the flowers to be dependent on such a contrivance for fertilization? Except Wallace's subterfuge, it is the result of creation by law. But reason asks, How came the orchids with unusually longer nectaries? Here we have conditions doing what they never did before. Why did not the moths leave them for other flowers? Why not the moths perpetuate smaller flowers adapted to them? Why should nectaries keep growing longer? Why any feature, and what feature, persist in existence? Why not stop? Why not be lost? Evolution has not an answer to all this. Again, the worthlessness of the theory can be seen in the fact, that it accounts just as well for opposite results from the same conditions had they come up for explanation. It applies equally well to the most contradictory cases, and from the same conditions. It is like a slop-shop coat. It fits every body, one as well as another, and fits nobody. Such speculations fit one case as well as another, and are utterly worthless to explain any.

Wallace admits that Darwin has to use teleological language in describing nature, and that he does himself; but attempts to evade the only logical conclusion, that there is teleology in nature, by saying it is metaphorical and an infirmity of thought. Grant that the language is metaphorical for a moment; it does not remove the idea of teleology in nature. There must be teleology in nature, as there is in man's operations—there must be similar features in them, teleological features, or the metaphorical language could not be used; and would not be demanded by the nature of the case. But it is not *metaphorical*, nor is it an infirmity of thought. I wonder what the evolutionist will leave to us of our rational ideas and conceptions when he has disposed of all infirmities of thought. In describing the processes of nature, the evolutionist invariably uses teleological language and in speaking of the operations of what he calls the laws of nature, he invariably anthropomorphizes them; or he applies to these operations the terms he uses in describing man's operations. This is not an infirmity of thought but a necessity of truth. The processes of nature, and the operation of its laws and forces, contain as their fundamental characteristics the same features, that in man's operations we call co-ordination, adjustment, design, plan, system, with prevision and provision. The evolutionist can not describe nature without recognizing these characteristics, and using these terms. Man in so doing, does not, by an infirmity of thought, project himself into nature. He merely recognizes, of necessity, the fundamental characteristics of intelligent operations in man's works and the processes of nature. Then, by the language of the evolutionist, when describing nature, and in his attempts to disprove teleology, do we establish teleology in nature. Reason says the design must have had a designer. So palpably is this the case, that evolutionists intuitively ascribe the rudest implement in a cave to intelligence. They do not ascribe for one moment, the rudest splinter of flint to natural forces. But that wonderful instrument—the eye—was the result of blind, irrational forces, working without plan or purpose.

Common sense says evolution must have had an evolver. Self-evolution, spontaneous evolution by blind, insensate matter and blind, irrational force, in their aimless and purposeless ongoings, is a caricature on common sense. Evolution without plan, aim or purpose is equally absurd. If the evolutionist demands why we ascribe purpose and design to organs and functions, we reply, because intuition and common sense do so, and always have done so. The evolutionist himself can not describe them without doing so, or speak of them without doing so, even in his attempt to disprove design. When we have traced matter and force back to the crudest conception we can have of them, we have to place mind back of them to co-ordinate and adjust them, and adapt them to this course of evolution. We have to look on them as co-ordinated and regulated by mind and will, or to illicitly endow them with thought and will, by attributing to them what can be evolved by mind and will alone. Man learns to adjust and use the forces of nature. He learns the thought or idea by which they can be adjusted. The Infinite Mind adjusted them by infinite idea or thought. If it were not so, man could not adjust and use them, for he could not learn or apprehend the idea by which they are adjusted, and can be adjusted. The evolutionist can not show that this course of nature is a path along which mind did not travel, and could not have traveled, except by showing that it is unideal and irrational. When he has done this, he has destroyed all science, and rendered science an impossibility. When the evolutionist has cast out of nature all idea of teleology, he has destroyed all science, and rendered all science impossible, and rendered all use of nature by human reason an impossibility. It is certainly a strange fatuity that those who claim to be *par excellence* scientific men, and who arrogate to themselves the work of explaining nature, should think that they can do so only by emptying the processes of nature of all reason and thought, all teleology. The processes of nature can be apprehended by reason only by showing that reason had nothing to do with them, and that they are irrational and unideal! Nor do we anthropomorphize God, in recognizing teleology in nature. Nor do we evade teleology, or explain it away, by shouting "anthropomorphism," or that we make God in our own image and likeness. The evolutionist anthropomorphizes the laws of nature, and anthropomorphizes God. He speaks of the processes of nature just as he does of man's operations, because they exhibit the same characteristics and evidences of mind. He anthropomorphizes God when he objects to the idea of God's doing certain things he finds in nature. He anthropomorphizes the Creator, and makes him like himself. He means, I would not have done so, hence God could not have done so—the very worst kind of anthropomorphism. Let us learn and accept what is in nature, and not anthropomorphize God, by assuming what is not, in opposition to what is, as does the evolutionist. The evolutionist in anthropomorphizing the processes of nature, proves that such a process is legitimate and indeed unavoidable. The Absolute Mind is not necessarily radically and essentially different from finite mind, any more than absolute space must necessarily be radically and essentially different from finite space.

We have already called attention to the fact that, in the primordial constitution of matter and force, in the first constitution of the original elements of matter and its properties, the first constitution of force and its manifestations and properties—in their numbers, proportions and relations, as to when, where, how long, how often, with what power, and in what order of succession, they shall act, in the figure of the planets and their orbits, and of systems in their relative densities, distances and masses and motions—in chemical action and crystallization—in the processes of nature in vegetable and animal life, there are realized the highest ideas of reason. After the research of thousands of years, man has scarcely entered the vestibule of this arcana of pure reason and thought! Evolution denies this, or refuses to recognize it, and attributes these infinite intellectual realizations, and the working out of these infinite rational ideas, to the aimless, purposeless workings of blind, irrational force, working without reason, idea or thought. Here is a radical error in the reasoning of the evolutionist. He attempts to strip what requires the highest efforts of reason, and taxes the highest efforts of thought even to apprehend it, of all connection with reason and thought. He can not even describe the processes of nature without exhausting the vocabulary of purely rational ideas, and yet he attempts to account for and explain the processes of nature without connecting them with reason and thought, and even denies all such connection. This suggests another palpable fallacy of the evolutionist. He denies all connection of mind with the processes of nature, yet such is the primordial constitution of things, and such the processes of nature in their characteristics and nature, that he can not speak of them without using terms recognizng their connection with mind, and having their necessary and only conceivable ground in mind. Does he say fixed laws or processes? Who fixed the laws or processes? Does he say regular or orderly laws or processes? Who regulated the laws or processes in this order? Does he say order of nature, plan of nature, system of nature, method of nature, or constitution of nature? Who gave to nature this order, plan, system, method or constitution? Who planned, ordered, systematized, methodized, or constituted nature? Does he say unchangeable, unalterable or invariable laws of nature? The expression implies co-ordination, adjustment and adaptatian in this unalterable, unchanging and invariable mode of acting. Then when he speaks of the anticipations of nature for results to follow, of its previsions of, and provisions for, coming existences and phenomena, he speaks of what can be done only by mind, and has its only conceivable ground in mind. In all his speculations, he uses terms and ideas having their only conceivable ground in mind, because he can not describe nature without using them, and while doing so, senselessly denies the great truth necessarily implied in them. We have in our operations the control of force by intelligence and will. We have our terms expressive of such action. The correspondence there is between our own operations, which we know and speak of as controlled by mind, and the processes and laws of nature compells us to use the same terms, implying the operation of reason and thought, in describing the processes of nature. Such, then, is the nature of the processes and laws of nature, and the evolutionist can not describe them without recognizing that they have their only conceivable ground in mind.

Electricity controls muscles, but that by no means explains the mystery of life, or does away with spirit, any more than the electricity that passes along the wire will account for the message, or dispense with the operator. Huxley says, in regard to Paley's famous design argument, based on the watch: "If the watch could be conceived to be the product of a less perfect structure, improved by natural selection, then it would appear to be the result of a method of trial and error, worked by unintelligent forces." In the first place the supposition can not be made. Natural selection, or, rather, blind irrational matter and force, don't improve. There would be no trial, for nothing is tried by unintelligent forces. There would be nothing to make the trial, for unintelligent forces do not try. There would be no error but a fortuitous working, for there was no aim. There would be no method, but an aimless, purposeless outgoing of unintelligent forces. The constant advance in nature, if a correction of trial and error, proves design and purpose. The watch being unintelligent, does not exclude design in the intelligent use of unintelligent matter and force. Because results are attained, seemingly by unintelligent matter and force, does not exclude intelligence and design in co-ordinating, adjusting and adapting matter and force to secure the result. This error appears in every page of the speculations of the evolutionists on this topic. Because unintelligent matter and force in nature produce results, and evolutionists can point out what matter and force produced them, does not exclude design and intelligence in their adjustment, co-ordination, any more than pointing out the form or process producing result in the watch excludes design in its production. It is no argument for the evolution of the watch that such forms exist, nor that it is in harmony with conditions, unless it be shown that conditions produce the watch, or are the causes of the adjustment of the watch. Nor should it be claimed that the watch be formed in an instant, perfect and in motion, nor that law and order of nature were violated in making it, because nature did not make it; nor, if made by machinery, that machinery shows that intelligence had nothing to do with it; nor that the machine must be like the watch — that is, that it varied but slightly from what produced it. All these blunders are made by the evolutionts in objecting to the theory of creation.

Another most palpable absurdity of the speculations of the evolutionist, and one that runs through all his speculations, is this: He seems to think that an accurate description of the processes of nature is an explanation of what produces them, and why they operate in that manner. He mistakes a description of the law of a phenomenon, and its mode of acting, for an explanation of what causes the phenomenon. As well might we take a catalogue of the inventions of the

Patent Office for an explanation of the machinery; or an explanation of how each machine operates, for an explanation of the force moving it; or an explanation of the force for a history of the inventor. Classifying phenomena and labeling them, and laying them up on shelves of learned phrases, as does the physicist, is not an explanation of the cause that produced them. So an enumeration of the conditions in which the variations of animals and plants are produced is no explanation of what caused the variations. Even if conditions produced the variations, which is not the case, it is no explanation. The questions arise, "What caused the conditions? What gave to them this causal efficiency? What arranged them? What gave the life varied? What implanted the adaptation to conditions, or the power of adapting itself to conditions?" Survival of the fittest expresses a result and not a cause of a process. The real cause, the efficient cause, is not hinted in such a phrase, or in such expressions, except to deny common sense by denying all causation. If the reader of these speculations will ask, as he proceeds with his reading, How much of this is mere description of the manner of the process, and how much is an explanation of the cause of the process, and of this manner of process, he will find that there is not a syllable of explanation of the cause in them.

We have already called attention to the failure of evolution to account for life, sensation, instinct, reason, volition, thought, rational, moral and religious nature. The difficulty is now attempted to be evaded or hidden in a phrase lately invented, called "correlation of forces." It is stated:

I. There are not many separate and distinct and even antagonistic forces as has been supposed. What seems to be such are but different manifestations of but one force. The differences in manifestation are caused by the difference of conditions under which the force is manifested. All these supposed different forces pass into each other, or into the one force. They can be changed into each other, and each has an equivalent in the other. Some include motion, heat, electricity, gravity, chemical action, life, sensation, instinct, reason, volition, thought, and all rational and moral force or power, in this one force. They are but modifications or different manifestations of this one force, and the difference in manifestation is occasioned by the difference of conditions under which it is manifested. One of the principal conditions, or causes of difference of manifestation, is the difference in organization or constitution of the matter in which or through which force is manifested.

II. We know nothing of the real or ultimate nature of this one force. We can only observe its manifestations and their characteristics, and classify them; and when we have done this we have reached the utmost that can be achieved by science.

Such, in brief, is the new speculation of the correlation of forces. Even if we admit this assumption of science, so called, it does not remove the difficulty that is pressed on the evolutionist: Whence came life, sensation, reason, thought? We can establish, by an appeal to the observations and writings of the physicists themselves, the following positions:

I. The nearest conception we can have of force, or the ultimate nature of force, is our consciousness of mental power in action, or of mind force. The next nearest conception is our consciousness of vital force or animal life, or animal life force in our bodies.

II. On our consciousness of mind force, or mental power in action, are based all our conceptions of force, and all our reasoning on force. This we have shown by appeal to the phraseology and reasoning of the evolutionist himself.

III. We know by consciousness, that there is a difference between the mere animal life force of our bodies, regulated and controlled by our minds, and our minds, which control and regulate this animal life force.

IV. We know by consciousness that our animal life force is controlled and regulated by our minds, exhibiting co-ordination, adjustment and adaptation, design, plan, prevision and provision in such control and regulation.

V. All of the displays of this one force in nature, all its actions, reactions, and interactions, all of its manifestations and modifications, are controlled, regulated, co-ordinated, adjusted, and adapted, in order, method, and system, exhibiting design, plan and purpose, with prevision of, and provision for, all that is produced by it, regulated and controlled by mathematical and other laws that are purely rational and mental, expressing and realizing the highest and most abstruse and abstract conceptions of reason.

VI. We intuitively recognize in nature the control and regulation of force by mental conceptions and rational ideas, and recognize in the manifestations of force, and in their actions, reactions and interactions, co-ordination, adjustment, adaptation, design, plan, prevision and provision, or the realization of the highest and most abstruse and abstract ideas and conceptions of reason.

VII. In so doing we do not project ourselves into nature or anthropomorphize nature, but we recognize in nature what the evolutionist himself is compelled to recognize in nature, in his descriptions of nature, even while denying its existence there, the control and regulation of force, exhibiting co-ordination, adjustment, adaptation, design, plan, prevision and provision. The exact correspondence between what we see in nature in the regulation and control of force, and in ourselves in the action of force, controlled and regulated by mind, compels us to recognize the control and regulation of mind in both cases, and throw back the control and regulation of forces, which we see in nature, on to mind as its only conceiveable ground.

But, although it may seem presumption for me to do so, I question this new speculation, called correlation of forces—that all phenomena are produced by one force—are but different manifestations of one force. It contradicts our consciousness that there is a distinction of individuality, identity, or being—between force and the mind, which controls force. It contradicts our intuitions that there is a similar distinction between life and mere physical force, between reason and the physical force of wind or steam. The reasoning by which correlation of force is established is in violation of every principle of inductive philosophy, which demands that we examine phenomena, and, from their characteristics, reason to their cause. The evolutionist very properly examines the phenomena of inorganic nature, and by their characteristics determines the physical force which is their cause. He does not, however, examine all the characteristics of the phenomena and recognize that the causes are themselves phenomena, and from all characteristics reason back to the ultimate cause of all being. But in the case of vital and mental phenomena, in violation of all inductive philosophy, which he professes to take as his guide, he refuses to investigate separately the radically dissimilar and unique phenomena of life, sensation, instinct, reason, and thought, and reason from their characteristics to their cause. He either assumes the similarity of the phenomena of the physical and mental world, in violation of all sense, or in violation of every principle of correct reasoning he applies results reached in the physical world to the radically dissimilar phenomena of the mental world. In its theories of secretion of thought by the brain—molecular action, chemical action, vibration of medullary particles, etc.—evolution overlooks the fact that there must be a self-active cause to originate these processes—that there must be an intelligent principle to take cognizance of them, and that there is a self-active principle that, by means of memory, imagination, and spontaneous thought, can arouse all these processes, independent of the processes and anterior to them, and also independent of all exterior causes. As an exterior cause that affects the body, or reaches the mind through the senses and arouses thought or emotion is a substantive agent, distinct from the body that it influences, or any part of it that it uses in reaching the mind, so must that which, in spontaneous thought uses the brain, be a substantive agent separate and distinct from the brain which it uses. As a cause, that from without would cause nausea of a physical organ is a real and substantive agent, separate and apart from the organ or the nerves or brain; so must that which, in spontaneous thought, causes nausea, be a real substantive agent, separate and distinct from the nerves and brain or organ.

If sensation be traced to certain nerves, and mental processes to the brain, and different mental processes to different portions of the brain, the query still arises, Is the brain the agent or is it the instrument? We have above proved it to be the instrument, and that the agent is a real substantive, intelligent existence apart from the brain. Such a tracing back of sensation and mental processes, merely shows that the mind acts through the nerves or brain, but it does not explain sensation or thought; it does not tell what sensation or thought are, nor what mind is, nor what it is that thinks, or uses the nerves or brain as its organs or instruments in sensation or thought. Suppose, to use the gross language of Cabanis, the brain does secrete thought as the liver does bile, still the question stands unanswered: What is it that operates through the brain, and uses it as its organ? To say the brain, is to confound agent with instrument, or the actor with his implements. To assume that it is physical force, is to ascribe to it what it does not possess and to argue in a circle. When we ask what causes physical force to accomplish so wonderful and foreign a result as thought, we are told it is that wonderful organization of matter know as the brain. If we ask what produces that wonderful organization of matter, the brain, that so controls and modifies physical force, we are told that physical force, its effect, is its cause. Physical force produces the brain, and the brain produces the physical force, or mode of force called thought. Reason says that the brain is but the instrument, and the instrument of a real substantive, intelligent agent, distinct from brain or physical force.

In this speculation, the correlation of forces, we have the same juggle of words that we have so often exposed. Heat is a mode of motion, and light is a mode of motion, and electricity is a mode of motion. All forces are modes of motion, says Tyndall, and it is applauded as a profound scientific discovery or idea. Modes of motion of what? Motion of what demands common sense. If thought be a mode of something, or a mode of motion of something, the reason of every thinker asks, Modes of what, or motion of what? Then are reason, thought, and emotion mere modes of motion of the same force that whirls the dust in the breeze? Are these forces capable of being resolved into each other? Common sense says they are not. They may neutralize each other in their influence on matter, and not be identical or capable of being resolved into each other. Are they identical, or does the use of matter by one merely unfit matter to be used by the other? Excessive physical toil may unfit one for mental effort, and excessive mental effort may unfit one for physical labor. But does this prove that the forces employed are identical? By no means. It merely proves that one exhausted the organization and unfitted it to be used by the other. This is clearly shown by the fact that within reasonable limits, physical labor prepares for mental effort, and after mental effort one can enjoy and perform physical labor better. Excessive amativeness unfits one for mental effort, and excessive mental effort unfits one for an exercise of amativeness; but does this prove that they are different modes of the same force, or resolvable into each other? Who will utter so gross and absurd a thought? Does it prove more than that each unfits the body to be exercised by the other, and, as for that matter, by itself? Has this any bearing on the question as to what uses the physical organization in either case, and controls and directs the displays of force displayed through it in each case? Then correlation of force, is based on a false philosophy—is unproved, is contradicted by consciousness, and can be disproved as far as vital force and mental force are concerned. Vital force and mental force can not be correlated by physical force. The last evasion is, that we can not know any thing about vital principle or life or soul, or of the cause, or the character of the cause, of these phenomena, that perplex the evolutionist.

In opposition to this, I affirm that, by consciousness, we know more of vital principle and life and soul than we can possibly know of mere physical force or matter; also that what we do know of matter and force comes by and through our knowledge of self, and the analogies of our knowledge of self and vital force. This we have sufficiently elaborated. We can learn the cause of the phenomena, and the character of that cause, by the characteristics of the phenomena. We can know a Milton, a Plato, a Shakespeare, by their works, and learn more of their character than did their cotemporaries, or than we can of our cotemporaries, for we can render, concerning them, a more dispassionate judgment. We know, from their works, that they possessed certain characteristics. In the same way we can learn the cause of the phenomena of nature, and the attributes of that cause. We can learn and know what he has done. From what he has done, we know he has certain attributes. What would we think of a man who would say that Milton or Shakespeare was unknowable? Is it not infinitely more absurd to say that God, the cause of all, is unknowable?

Let us now test the practical results of Darwinism as a working hypothesis. What does it accomplish in accounting for the problems of life and the varieties of life? Let us admit all that can be truthfully urged as a basis for Darwinism. There is indicated in nature an ascending scale of existence, from mechanical combinations of matter, through chemical compounds, lower forms of vegetable life up to higher forms, lower forms of animal life up to highest forms, lower types of the human race and various gradations up to its most favored specimens. There are certain facts in embryology that are very curious. Each higher animal, in various stages of its embryonic life, resembles various lower types of animals. Man, in his embryonic existence, resembles, in certain respects, in succession, the four lower grand divisions of animal nature. There are certain general or archetypal ideas that pervade all varieties of an order or species. The species of animal and vegetable nature are susceptible of being wonderfully varied by climate, crossing; and animals, especially, by climate, food domestication and cross-breeding, and especially by man's influence intelligently using these animals and applying these influences. There are certain common instincts that pervade all animal nature. We concede all of this. Now, shall we concede Darwin's hypothesis, that all varieties of animal and vegetable life have been produced from one primordial germ, or from a few primordial germs, by the influence of conditions. Other queries arise also. What is the character of these conditions? Are they entirely and solely unintelligent—modifications of matter and force? Or have intelligence, and results of intelligence, a place among them? Did intelligence devise and co-ordinate and arrange these conditions? Does intelligence control and direct them? Are there order, method, system, and plan in the operations of these conditions? Are there design, plan, purpose, prevision, provision, and law of intelligence and reason in their action and operations? Some of these queries we have already answered. We will now ask, as a matter of fact, do the facts of observation and experience sustain the assumptions of Darwin's hypothesis, that all varieties of vegetable and animal life have been produced by the influence of conditions on one primordial germ, or a few primordial germs?

We reply that they do not; and give as our first reason, one that is sufficient of itself. The genesis of a new species of animal or plant has never come within the knowledge of man in historic or prehistoric times. Evolutionists may speculate as much as they please, but they can not point to a single instance, and say that here is the genesis of a new species, and we can tell you all about, or even any thing about it. They can not point to an instance where conditions produced a single species in historic or geologic times. Darwin has confessed that he could not lay his finger on a single instance, and say, here is an instance where species has been produced according to my theory. He speculates as to how he thinks they may have been produced, but never says, "I know, or can prove, that this species has been thus produced," in a single instance.

Dr. Thompson, an eminent scientist of England, and a believer in evolution, says, "During the whole period of recorded human observation, in thousands of years on land, and latterly in the vast area of the sea, as revealed in deep sea dredgings, not a single instance of the change of one species into another has been detected; and, strange to say, in all the successive geologic formations and epochs, although new species were constantly appearing, and there is abundance of evidence of progressive change, no single case has as yet been found or observed of one species passing through a series of unappreciable modifications into another." As we have repeatedly stated, and so Dr. Thompson also did, geology contradicts and disproves the theory, by showing that the changes have been by steps, and that each species has existed in its greatest perfection at first, and that a great many species of the highest perfection have suddenly appeared, without any pre-existing lower types or prophetic forms. Darwin more than once confesses the immutability of species as far as human experience and knowledge extends, during all history and geologic epochs. Mummies of animals, and remains of animals in caves and geologic strata, show that species have ever remained the same, even during the immense periods claimed by geology. And they have remained the same under all influences of climate, food, and domestication. So persistently do species remain permanent under all conditions, and vastly different conditions, that Darwin confesses that but little stress can be laid on the influence of conditions. When he made that concession, he might as well have cast to one side his theory, for that is based on the influence of conditions, and is an assumption that conditions have produced all species and varieties.

Nature has placed a chasm between species in the law of hybridization. Cross-breeding between varieties of the same species is possible, but hybridization between different species is impossible, except in case of a very few species, and these are very closely allied species of the same family, and in these cases the hybrids are sterile, so that the production of a new species is impossible. Nature thus has positively declared that there is an impassable chasm between species, that has never been passed, for it can not be passed. No new species has been produced by insensible gradation from a lower to a higher species, for there are no such insensible gradations but an impassable chasm. The difference between species is more than a difference in degree, it is one of nature and kind.

There is an incompatibility of nature in the case of species. Another fact closely allied to this, that renders it of vital importance: No divergence from any species or stock, ever has become sterile to the original stock; hence, no divergence ever has become a new species. These two facts, when combined, settle forever Darwin's hypothesis concerning the origin of species. Evolution confounds variability with mutability, when they are radically different. Mutability is necessary to produce species. Variability modifies species within definite limits. Variability has limits, and never passes into mutability. Another important fact connected with this, is that when the varying influence is removed, the variation returns to the original stock, or partially so. Variation can not go beyond certain limits without producing sterility. Man's improvements, if carried beyond a certain limit, produce sterility. This is often seen in the nursery and seed gardens; and breeders and horticulturalists, and all persons improving plants or animals, are often under the necessity of returning to the original stock to restore fertility and vitality. Another radical defect in Darwin's theory is that almost all of its facts and illustrations, and all its well-established and important ones, are taken from what man, by means of his intelligence, has done. By domestication, by change of climate and food, and change of conditions, man's intelligence and action have produced strange variations, but they have never produced a new species. Evolution attempts, by means of what the intelligence of man has done, in producing variations, although it has never produced a new species, to prove that unintelligent matter and force would produce an almost infinitely greater result, a new species. Man's intelligence was needed to cause the change of conditions. Animals and plants never would have produced them. Man's intelligence was needed to apply and render effectual the conditions, and to perpetuate the effects, and continue them in one direction. If man's will and intelligence can not produce a new species, using, as he does, all the conditions in nature, how can unintelligent matter and force produce thousands, yea hundreds of thousands? Then we repreat our previous fact, that species have definite limits which they never pass, under man's influence or any other. Those limits may vary greatly, but they are never transcended.

There are radical physiological differences between species that are never bridged over by transitional forms. There is absolutely not a transitional form in existence, nor can one be found in historic or geologic epochs. Species can be found that partake of the characteristics of two or more species or orders or genera, but they remain permanent, in precisely that form, as long as they exist. The bat is a bat, and the duck-billed animal, that has web feet, lays eggs, and suckles its offspring, is a platypus as long as the species exists. Since evolution supposes development to be continually working during all time, it, of necessity, must regard every species now in existence as transitional, and undergoing the process of transmutation now. Its conditions that it appeals to, to produce species, are in existence now, and operating now, and are producing the effect they did in the past; if so, every species in existence is transitional. If conditions produce new species by imperceptible gradations, there ought to be innumerable gradations, and such a confusion of varieties as would defy classification. There would be no chasm between species. The transition from one species to another would not be abrupt. We would be puzzled to distinguish between species in the case of any species. Experience declares that, with rare exceptions, species are easily classified. There are impassable chasms between them. There are absolutely no transitional forms. There is no confusion. Geology gives no transitional forms. Species appear in their greatest perfection at first, and remain the same during all geologic epochs in which they exist, and under all conditions. In case of the ibis, reindeer and elk, if geology be true, they have remained unchanged for hundreds of thousands of years. If it be said that change of conditions are needed to produce change in species, we reply that there have been colossal changes. But selection, we are told, can only act when variations appear. Then it is not a cause of variations, and Darwinism is given up. When variations appear now, they are monstrosities, and are eliminated by the very conditions that are supposed to preserve them. Nature pronounces against preservation of variations by making monstrosities sterile.

Darwinism assumes the transmutation of species. It makes creation a chain of connected links, in which every link is continually being transmuted into the link above it, and then into the next, and so on. This never has occurred in human experience or knowledge, nor is there the slightest evidence in human experience or knowledge that it ever has occurred in a single instance. The geologic records in all their strata fail to furnish a hint of such transmutation. Our attention is often called to such transformations as the egg, the caterpillar, the grub, and the moth. But, unfortunately for evolution, the moth never goes higher, but we have from it the egg, worm, etc. We have this cycle during all experience. This fact, with former ones, is sufficient to set to one side all Darwinism forever. When the attention of the evolutionist is called to these defects in his speculations—that he can not furnish a single instance of the genesis of a new species by conditions, by the method he claims produced them, nor of a single transitional form, nor of the transmutation of species—he has two evasions. The first is the imperfection of the geological record. A more pitiful excuse never was offered. We have, in the geologic strata, and in our knowledge, millions of varieties and species. In some geologic periods, the remains of species, to the number of many thousands, have been catalogued in each epoch. When we consider the vast number of transitional forms that evolution must place between them, and the vast number of transmutations needed to bridge over the chasms between them, and then the ease with which the vast and powerful forms, that these transitional forms between the higher species at least must have had, could have been preserved; and then reflect that we find absolutely none, we can only conclude, that we find none, because there never were any in existence. Countless numbers of species, easily destroyed, have been preserved through tremendous changes, when most of the transitional forms, if there had been any, must have been far more easily preserved.

The other evasion is to demand a period of time practically infinite, to effect the changes that are claimed for conditions. We are told that the changes are so gradual and imperceptible, that even during the period of man's existence on the earth, he has not had sufficient time to observe any perceptible change. The reply to this evasion is very easy. The extraordinary births and monstrosities to which some evolutionists appeal are the work of one reproduction. The variations of species, to which Darwin appeals are, at farthest, the work of a few generations, and often of a few years. Changes within the limits of species are always very palpable in a very short period. In the many thousands of animals and plants that have existed for thousands of years with man, there certainly ought to be observed these transitional forms, and these transmutations, no matter how long it may take. There ought to be some evidence of transitional forms, or transmutations, in so many thousands of years, but there are none. Then when we take the geologic strata, and concede to them the millions of years that the evolutionist claims, and examine their millions of species, and find not a single iota of evidence for transitional forms or transmutation, the evasion becomes simply an insult to reason. Evolution makes the action of heat, earthquake and other physical causes far more destructive than now, during the geologic epochs. If there were enormous generations of life during these periods, when conditions were comparatively so unfavorable and even so destructive, why not far greater generations of new life now, when all is tranquil, and so much better fitted to evolution, according to the hypothesis? Why not transitional forms and transmutations now, when conditions are so much better fitted to the work. Finally, this attempt to make the change so gradual as to be absolutely imperceptible by man, in the many thousand years of his history, and the vast periods of geology, practically removes the whole hypothesis beyond human knowledge, and renders it incapable of proof, and makes of it an absurdity, and it is an insult to all reason and sense to demand that we accept a theory that the advocates have to remove beyond all possibility of proof, to save it from utter overthrow. Then astronomy and geology utterly refuse to concede to evolution the vast, the infinite time it demands. If the thousands of years of man's history, and if the vast periods of geology, have produced no change on certain well-known species, how long would it take to develop man from a cloud of star-dust, as Tyndall asserts?

Another fatal objection is furnished by geology, on which Darwinism specially relies. Geology teaches that so far from only lower forms appearing only at first, and then passing into higher forms and disappearing in this way, as Darwin demands, the opposite has been the case. According to Darwinism only lower forms should appear in the early geologic epochs. They should pass into higher with change of conditions. All highly organized species have been developed by imperceptible gradations from lower types, and each should have countless lower ancestral types. But in the case of fishes, very highly organized species appeared first, and without any ancestral forms. The same holds true of the batrachian or frog family. During the mesozoic period, the deinosauri and other very highly organized animals appeared without any progenitors, and appear suddenly without any prophethic types. Reptiles of much lower organization appeared long after these highly organized animals. All this contradicts the ascending gradual scale demanded by Darwinism. Again, geology teaches that species appear in their greatest perfection at first. Geology can point to periods when they did not exist. Then it can point to the remains in succeeding epochs, but they are in their highest perfection when they first appear. Highly organized species appeared early without progenitors, and have persisted throughout entire geologic epochs, and in many cases during several, and throughout great changes of conditions. If there has been any change it has been one of degeneracy, and not of improvement. There has been a progress in creation, but it has been by successive steps. There has been evolution, but it has been evolution of the plan of the Creator. Geology clearly teaches that all species, even the most highly organized, appear suddenly, and in the highest perfection at first. Strongly marked specific differences suddenly appear also, and not gradually, as demanded by the theory of development. Geology teaches then that as the earth became unfitted for lower forms, or any forms, they degenerated and disappeared, and others were substituted in their greatest perfection at first. All these facts of geology are in direct contradiction of Darwinism, and every theory of evolution by mere matter and force.

Darwinism explains all varieties and species by the influence of conditions on a few primordial germs. There are a few well established facts of geology that positively contradicts this assumption. Darwinism demands change of conditions to cause improvements, for by means of improvements the fittest were enabled to survive. These lower forms would become unfitted to survive and would disappear. But the lowest forms have persisted through all epochs and all changes of conditions. These conditions do not determine the order of life; or if they do, there have been no changes of conditions to evolve new forms of life. The evolutionist may take which alternative he pleases. If conditions determine the order of life, there has been no change of conditions, for these simple forms persist through all changes; or if there have been changes, these changes of conditions do not produce the varieties of life, for the forms have not been varied. The very simplest forms of life appear now, and have persisted during all ages. Highest and lowest forms have co-existed in nearly all epochs. Conditions can not have produced them. Man carries animals and plants into every condition, and they flourish, showing their persistence against conditions. Again, often they improve, thus showing that conditions highly adapted to them failed to produce them, and showing that animals are adapted to conditions, and not that conditions produced animals adapted to themselves. Even the lowest and simplest forms have persisted through all changes and varieties of circumstances. There is not a subservience of life to physical conditions, but a superiority of vital force to them, and it was not produced by them. Physical force is ever destructive of vital force, unless conquered and co-ordinated by it, and vital force is antagonistic to physical forces, and conquers and subordinates them, and renders them subservient to itself. A multitude of orders of animals, with innumerable varieties, existing side by side under the same conditions, vastly different animals under the same conditions, and the same animals under all varieties of condition, disprove evolution by conditions.

Then conditions do not produce similar results, but precisely opposite results. In the sea the same conditions obtain certainly, and in them we find the air breathing porpoise and water breathing sturgeon. Then conditions do not produce what is most fitted. The air breathing porpoise or whale, is certainly most unfitted to be produced by water or in water. We have no horses on the pampas of the New World, although they existed as the most adapted to horses of any portion of the globe for ages, and there were equine type in the New World for several geologic epochs. Multitudes of cases might be given where man has carried animals into places where they did not exist, and they flourished, and even improved, thus showing that the conditions were especially fitted for them, yet had not produced them, although they had existed for vast ages. Hence, conditions have failed to evolve what was especially fitted to them, and just what they would produce, did they produce any thing.

Again, we find existences in conditions that are utterly opposed to their production. We find existences the very opposite of the conditions. An air-breathing animal in water would no more be expected, or be produced by conditions, than a gilled animal, that had to go into the water to get breath, would be expceted to be produced by conditions on land. The conditions that are appealed to to account for the development, are opposed to the development in most cases. The change necessary in the lungs and other organs in passing from water to land, and from land to water, or other changes equally great, are not susceptible of being produced by development. No amount of trial or effort could make a fish breathe air, or an air-breathing animal breathe water. Change of conditions destroys instead of changing or adapting. The evolutionist has this dilemma to meet: Either animals were adapted to conditions, or they were not. If adapted at first, then his law of change by conditions is gone, and the query arises, Who adapted them to conditions? If not adapted at first, how did they exist until they were adapted? The action of the change of conditions would destroy, instead of producing adaptation. It is like the man's calf that he was trying to adapt to live on one straw per day. Before he got him adapted he killed him in adapting him to such conditions! The evolutionist evades this by calling attention to the case of divers and fishers who become accustomed to remaining under water a wonderful length of time comparatively. But it is an evasion. The diver never breathes water. His power of endurance is increased, but there is a very narrow limit to it. Then the pain and inconvenience of adaptation would compel the animal to avoid the struggle of adaptation. Darwinism supposes that animals leave conditions in which they are adapted and enjoy themselves, and press into conditions in which they are unadapted and suffer the pain and destruction of adaptation.

Then conditions produce such opposite results, such contradictory results. They did not affect man as they did other animals. If man was once an ape-like animal, with hairy covering, a tail which was as useful as a hand almost, and a prehensile foot and toe, his modes of life and locomotion and conditions would be entirely opposed to his loss of these characteristics, absolutely necessary to his mode of life. We are asked to believe that a mode of life and conditions fitted man for these conditions, and furnished him with these characteristics when he was unfitted; and then unfitted him for themselves, and deprived him of these characteristics so essential to his mode of life and conditions, when he was so well fitted to them! Conditions produced results so opposite to themselves. Conditions gave to man and the ape a prehensile tail, a prehensile foot and toe, and then conditions stripped man of these necessary and essential characteristics, and the same conditions perpetuated and intensified these same characteristics in the ape! The law of conditions is like the old woman's rule for testing eggs: "Put them into wat and the good ones will sink or swim, and I don't know which!" Had the old woman put her eggs in water and reasoned: This *swims*, therefore it is good; this *sinks*, and therefore it is good, and pronounced them all tested and proved to be good, she would have been a full-fledged philosopher of the Darwinian type. The ape sinks and the man swims in precisely the same conditions, therefore the same conditions produce these exactly opposite results.

Then the same conditions produce such different results. They make of one and the same organ the wing of a bird, the paddle of a whale, the flipper of a mole, the wing of a bat and the hand of a man. Again, we see the same organ used in such a variety of ways and conditions, often in conditions radically opposed to each other. And then the same result is reached often in such different ways by the use of such different organs. Often, the organs and results are so opposed to each other that it is impossible to concieve that conditions could have caused them. This theory of conditions does not harmonize with homologous organs and structures in so widely different and even opposite conditions, or with such widely different structures and organs in the same conditions. Conditions could not have produced contradictory and opposite results in the one case, or such opposite and different conditions produced the same result in the other. Man's loss of hairy covering, and prehensile foot and toe, and prehensile tail, if he ever was a simian and possessed them, was just the opposite of what the conditions could have produced. Conditions fitted man for themselves when he was unfitted, and then they unfitted him for themselves when he was fitted! These absurdities show, as Darwin says, that little stress can be laid on conditions.

Darwinism requires that each variation, produced by conditions, be an improvement, be a step in an ascending scale, from lower to higher, from simple to complex, from useless to useful. Whence came this invariably beneficial tendency of conditions, this uniform upward action of conditions? Was it not planned and sustained by mind? Again, Darwinism requires that improvements be a help in the struggle for life.

If forms with useful variations struggle with unimproved, why should improved prevail? We know that man's improvements unfit for the struggle for life. The improved horse, dog or ox stands no chance in a struggle for life with unimproved. Then when man's influence is removed, conditions and the influence of nature remove the improvements, and return the animal to the original stock, thus showing, if any thing, that nature and conditions have a tendency to destroy improvements, and not to preserve them. Variations would not be improvements nor aids in a struggle for life until perfect. All variations would be a hindrance, and not a help, until perfected. They are supposed to be developed by use, when there can be no use for them until developed. If they are rudimentary and undeveloped and unfit for use, how could a lack of use do what use is supposed to do? If they were a blemish and a hindrance and unfitted, conditions, if they perform the part ascribed to them by evolution, would remove instead of developing them. Evolution does not account for incipient structures in nature. They are not produced by use, for they are not used. They are not developed by use, for they are not used. Disuse does not remove them. They remain unchanged. According to evolution, they are either incipient, rudimental organs, to be developed by use, or obsolete organs to be discarded and eliminated by disuse. Neither is done. They remain unchanged for ages under all conditions. These incipient organs in certain animals, that are a burden and a hindrance to any development that would make them useful, and that became highly useful when developed in other animals, are inexplicable in any theory of evolution. Silent organs that are a burden in certain animals, and become highly useful when developed in others, homologous organs performing widely different functions, widely different organs performing the same functions, are inexplicable and inconceivable in a system of developments by conditions, but are perfectly rational and conceivable as a part of a general plan or mental conception by a creating mind. In creation, we have seen that there are governing conceptions, ideal archetypes, that control the course of development pursued in the acts of creation. As in the wheelbarrow, the cart, the wagon, the rockaway and landau, there is an idea developed by intelligence, so in the orohippos, the protohippos, the hipparian and horse, there is a development of an ideal concept or archetypal form, by intelligence, and not a development of one out of the other by unintelligent conditions. Lest it be said that we are guilty of anthropomorphism, we make this additional remark: There is not the trial and imperfection in one case that there is in the others. In the course of creation there was perfect knowledge of the result from the beginning, and provision for it, and the result was approached unerringly and continually.

There are results that evolution by conditions utterly fails to account for. No amount of conditions can account for the neck of the giraffe, the proboscis of the elephant, the hand of man, or the eye of the eagle, or for the wonderful systems of circulation, digestion, respiration, and reproduction in species, varying so wonderfully from each other. Let us attempt to conceive of natural selection forming rude materials in many varieties of letters, then these letters into words, and the words into sentences, and the sentences into paragraphs, and the paragraphs into chapters, and the chapters into Darwin's "Origin of Species," and then printing and binding the book as it stands on the shelves of our libraries. Do you say madness? Then what shall we say of the idea that natural selection took a cloud of star-dust, and formed the author so infinitely above his book, replete as it is with learning and research? How inconceivably above the volume is the human form, and how infinitely above the speculations of the argument is the human soul? We do not see nature performing such wonderful acts now. Nature takes the materials of which the telescope and watch are formed, and makes what we call slag. Intelligent man takes the same materials and makes watches and telescopes. But these do not continue the work of making other telescopes and watches. Man has to do that. The theory of evolution makes matter and force do the work of mind. The theory of creation makes mind do what mind alone can do. All talk of blind, irrational matter and force, by natural selection, doing the work of mind, in producing such organs as the eye or hand, is the despair of reason and sense. It makes unintelligence do what requires the highest effort of intelligence to understand, and what naught but a high effort of intelligence could produce. This one objection alone — that evolution makes matter do what can be done only by mind, and unintelligence do the work of intelligence, and no-will do the work of will, is sufficient to brand it as the most absurd chimera that ever insulted human reason.

There are instincts and processes in nature that have reference to the organisms of other animals, and never could have been produced by natural selection. Take the electric apparatus of the eel, or the poison of the serpent. These have reference to the organism of other animals, and exhibit perfect knowledge of them. In the poison of the serpent and other animals, there is a knowledge of the structure of other animals and wonderful chemical skill in the poison. Sometimes it has reference to the organism of certain other animals, to even a very few, and is innoxious to others. How could conditions around one organism produce variations that have intelligent reference to entirely different organisms? It took men thousands of years of research to attain to a knowledge of electricity and of the construction of the pile, coil, and battery, and the medium through which electricity will act. Here, in the eel, we have a perfect coil pile and battery, a knowledge of the medium through which electricity will act, and of the organization of other animals. We are asked to believe that this highest display of reason in scientific knowledge, and scientific skill in construction, was the result of blind matter and force, and conditions acting unintelligently. Take the case of the cuckoo laying eggs in the nests of other birds, the ant that makes slaves of other ants, or of the bee that builds a cell that displays such perfect knowledge of geometrical and architectural principles of economy of space, and strength and economy of material. Did conditions of unintelligent matter and force produce these actions, so expressive of the highest order of intelligence and skill, and so utterly foreign to conditions? Then take the case of the queen bee destroying her fertile daughters, and of the working bees destroying the males or drones. Here we have a destruction of the fittest. In the latter case it is the unfittest destroying the fittest. Evolution utterly fails to account for these phenomena.

Evolution fails to account for another fact in nature. A change in any organ or structure is correlated with other changes. Symmetry of sides is secured. Other organs in the animal are co-ordinated with the change by necessary changes. Other animals and plants are co-ordinated in such changes. Such co-ordination and correlation are not the work of conditions of unintelligent forces. Another fact seen in nature is utterly inexplicable by evolution by conditions. There are anticipations for coming existences and events. The young frog loses his water-breathing apparatus preparatory to becoming an air-breathing animal. Coal and minerals were prepared and placed for man's use ages before he appeared. They are located in just such a way as to meet his wants. Unintelligent forces never did this. As we have often remarked, we have to make of primordial germs a god or infinite fetich. Or we have to make of conditions a god. The evolutionist deifies natural selection. It preserves the good, the useful, the beautiful, and rejects the weak, ugly, sickly, and worthless. In all this is displayed the most wonderful teleology. The very term survival of the fittest expresses the most remarkable teleology. Then evolution has in this preservation of the fittest, the useful, the beautiful, the good, the most complete teleology.

It is absurd to ascribe all this to a metaphor, natural selection. If it is not a metaphor then it is an absurdity. The term natural selection, unconscious selection, is an absurdity. Selection is the act of an intelligent will. There is no selection in unintelligent nature, and it is absurd to talk of it. Huxley's illustration of unconscious selection is an absurdity. He takes the case of the wind moving sand and leaving pebbles behind. It selects the sand and rejects the pebbles. The truth is, that it moves the sand because it can, and leaves the pebbles because it can not. Huxley's selection is like Hobson's choice. You can take what you choose provided you choose one thing alone that I have chosen for you. The wind selects the sand, because it can move nothing else.

Evolution fails to account for the great difference there is between the brain of man, of the lowest specimen of humanity, and of the highest animal on earth. It is a broad chasm, and not a slight upward ascent of an inclined plane. The brain of man is two and a half times larger in proportion than that of the most highly endowed animal. When we reflect, also, that if we compare the intellectual portions, the ratio is ten to one, and in the moral and religious faculties there is no comparison, for the animal is destitute of these; there is established a chasm no hypothesis of evolution can leap or bridge. The brain of the savage was not produced by his condition of life. It is much larger than his condition of life demands. His condition, then, is a retrogression, a degradation into which he has dragged down his brain. Conditions never produced his brain. We have no indication of the development of man from lower animals. Man's lineage goes back as far as that of the simian, hence the simian was not his progenitor. Zoologically, men and apes have no affinity of species, genus, family, or order.

An eminent naturalist has established four hundred physiological differences between man and the simian family, and such differences too as those on which species are based. They are differences of species and not of varieties. Likeness of organs, or types, or plan, does not prove derivation any more than the wheelbarrow, cart, wagon, and carriage have descended one from the other. Animals are provided with means of sustenance, existence, protection from elements, and of defense and offense within themselves. Animals never make mistakes. They never progress. They use no implements, and can invent none. Animals began existence perfect. Man has in himself no means of sustenance, existence, protection from elements, or of defense and offense. He makes mistakes. He begins existence utterly helpless, and remains so for years. Is of slow growth. Yet man is lord of creation. Renders all subservient to him. Easily destroys all life. He has reason, and renders subservient all forces and powers of nature. He uses and invents implements and machines. He corrects mistakes, discovers, invents, and improves. Is a progressive being—illimitably so. No animal can conceive of man's means and mode of life. They do not emulate or imitate. Do not learn from him. Do not progress. Can not be made to take on man's nature or mode of existence. Are limited by structure and instinct. How can a living machine put off contrivances necessary to existence, and assume the sphere of intelligence?

Evolutionists tell us man was a carnivorous animal, conquering the powerful carnivora of the post-glacial epochs, and able to withstand a rigorous climate. They do not deduce this from a single known fact, or from his physical organization. The latter declares him to be a frugivorous animal, suited to a mild climate, for he has no means of obtaining flesh, and has no protection from a rigorous climate. Again, apes, from whence he is said to spring, are frugivorous. They have powerful jaws and teeth as a means of defense. If man was a carnivorous ape, his teeth, and jaws, and hand-like feet, would become more marked as he fought for life and food, and conquered other animals. Then where, in the records of these epochs, do we have any trace of such a powerful animal. Geology furnishes us thousands of species and millions of their remains, but not one trace of such an animal as this. Had there been such an animal in existence, he would not, in opposition to all conditions, have lost these characteristics suited to his condition, and developed into an animal wanting them, and utterly opposed to his conditions. Natural selection, then, when applied to man, can have no relation to his physical nature, but only to his mental and moral nature. The latter selects and improves. The former does not. The lowest man subsists by means entirely distinct from the animal in means of sustenance, existence, protection from elements, and of offense and defense. If stripped of these, he would perish. Reduce man to animal means of existence, and he would perish. Confine the brute to man's means of life, and he would perish.

Evolution fails to account for self-consciousness, reason, and rational and moral nature in man. All human beings, no matter how degraded, have them. The lowest savages are moral agents, susceptible of education, and progress, and elevation. All men, even the lowest savages, have moral and religious ideas, God, religion, moral desert, and duty. Brutes can not by any amount of training be made to take on such ideas. How, then, could a brute evolve them without the aid of a higher intelligence, or under the influence of unintelligent conditions? The lower forms of human life are degradation, as is proved by man's great brain, and his moral and religious ideas that never originated in such condition. Where man had his origin, he never was surrounded by physical conditions to reduce him so low, nor was he ever in such low condition, if archæology be true. Where these low conditions exist, man could not have had his origin. Hence, he never had his origin in these low conditions, and they are degradations. Because man was ignorant of mechanic arts at first, does not prove that he was as low as modern savage tribes. His capacity may have been infinitely above these savages in other directions. His moral and rational nature may have been vastly above them. A lady may be unable to cope with a savage in struggle for life and mechanic arts, and yet be no nearer an animal than the latter.

No amount of conditions of physical nature can evolve man's moral and religious nature, or his rational nature. No natural selection could produce man's rational conceptions of infinity in time, space, being and causation, and of causation, right and wrong. Natural selection never produced the catholic, rational, moral and religious ideas of God, government by him, responsibility, moral desert, retribution, moral character, providence, prayer, inspiration, atonement, sacrifice, religion and worship. How could conditions of irrational matter or force give rise to artistic feeling and capacity? Ideas of melody and music, instrumental and vocal, poetry, sculpture, painting and the arts? Then poetry and philosophy, and all departments of science, literature and art? Abstract ideas of form, beauty, arithmetic and geometry? Abstract ideas of conscience, law, order, method, justice and truth? Evolution can not account for the human voice, and for speech and language. Whence came the matchless voice of Jenny Lind or Parepa? Whence came language, with all its principles, laws, and development in eloquence and literature? How much training would it take to develop the most highly organized animal, to enable it to sing, speak and use human language? How much development would change the breathing apparatus of an animal into man's vocal organs, or the cries of brutes into the eloquence of a Demosthenes? How long would it take animals under unintelligent conditions to do all this? Evolution assumes that conditions without intelligence have done this? How did natural selection evolve the symphonies of a Mozart, a Beethoven, a Haydn, or a Mendelssohn?

Again, it does not remove the miracle to cheapen it. It is as impossible for blind, insensate matter and blind, irrational force to leap the chasm between inorganic matter and a cell of protoplasm, as from a cloud of star-dust to man, for the very self-evident reason that they do not leap at all. Hence the attempt to remove the miracle by chopping it up into an infinite number of infinitely small particles, and distributing them in an almost infinite series of structures, through an almost infinite time, only infinitely increases the difficulty; for it renders necessary an almost infinite series of leaps, each as impossible for blind, irrational matter and force as the one almost infinite leap would be. Suppose we were standing before the Tip-Top House on Mount Washington, and were to be told that all the material was once in the valley, nearly a mile lower than the house, and several miles distant down the mountain, and were to be convinced that such was the case, and were to ask how came they here? If we were told they leaped up here spontaneously at one leap, we would reject it with scorn, as an insult to reason, for matter does not spontaneously leap. "But," persists the one making the assertion, "it was done in an almost infinite number of leaps." "No," we reply, "it matters not how many, for matter does not leap at all. It can leap miles as well as an inch." "But it just slid up," is urged. "No; matter do n't slide," we would say. "Well," says the author of "Evolution and Progress," "it would have to do it only once!" "Well, there is the rub. Nature does not do it once, even. If she could do it once, there would be no trouble about a million such acts." "Well," says Darwin, "it could do it if you will grant it time enough." No; no amount of time could impart to matter one particle of causal efficiency. Time is not a cause, but merely a period during which a cause acts.

Then this attempt to get rid of the difficulty by dividing it into an infinite number of small particles, and distributing them in an infinite series through an infinite period of time, only increases it infinitely; for nature could make the leap at one bound as easily as it could one of these small leaps. If it is made an inclined plane, it will not help; for nature does not slide upward spontaneously. Nor will an infinite period of time help the matter, for time will not add one particle of causal efficiency, especially one particle of new and different causal efficiency.

There are remarkable phenomena in the world that evolution is utterly unable to solve. Mere struggle for life never produced beauty and its varieties, especially the almost infinite variety of ideal conceptions in which it is displayed. Nor will Darwin's last effort, sexual selection, explain it. Greater strength would enable the male to monopolize the females, but that throws no light on the origin of beauty. It is the very despair of all reasoning to talk of sexual selection producing the infinite varieties of beauty, especially when they exhibit such wonderful ideal conceptions. What influence does a spot on a feather, or a slight difference in an organ, or in the form or length of the body, have on animals under the influence of this overpowering passion? There is absolutely no selection influenced by beauty about the action of this appetite. This all-pervading idea of beauty, seen in all nature, is without a shadow of explanation under this system. Especially is this the case with the high ideal conceptions of beauty realized, and the sublime ideas of reason wrought out in the beauty of all nature. Then, in human action, whence came the works and ideas of the artists and sculptors and architects of our race? Did struggle for life, or mere conditions of physical force in matter, produce them? Then the wonderful intellects of a Plato, a Demosthenes, a Hume, a Milton, a Shakespeare, a Newton, a Bacon, and their great works, what produced them? Did struggle for life—unintelligent conditions—produce them? The achievements of our race in all departments of mind are the work of blind irrational force, modified by insensate matter!

Evolution makes no will produce will, unintelligence produce intelligence, and things destitute of moral character produce moral character, things destitute of moral nature or character produce moral character and nature. According to evolution there was a time when none of these were in existence. Then things without volition, moral character, nature, or idea, or intelligence, evolved all these. Intelligence and morality are original characteristics or processes. They exist and are not evolved, especially by that which does not contain them, nor out of what does not contain them. Here is a fatal defect of evolution and Darwinism. Again, struggle for life never produced the results of the moral and religious world, any more than it did these ideas. How could brutal, selfish struggle for life produce generosity, trust in providence, love, faith, longing for immortality, and belief in it? Selfish, brutal struggle for life, in a state of brutal instinctive animalism, or brutal, idiotic savagery, never produced moral sense and conscience, and sense of right and wrong, and accountability and obligation, duty, love of truth, justice and duty for their own sake. Have the patriot's sacrifice, the philanthropist's self-denial, and the martyr's devotion sprang from brutal struggle for life? Social instincts, such as exist among gregarious animals, will not produce them, for unless there was moral sense to control, direct and elevate them, they would only become more shrewdly selfish. These moral qualities and this moral sense of man must exist before what evolution assumes to be their cause, to control and elevate it, before it would have any tendency except in an opposite direction. How can a sense of an utility above and in opposition to selfish utility arise in selfishness and in a sense and exercise of selfish utility? Whence came the accumulated growth and experience? When will an accumulation of experiences of selfish utility, accumulated under a sense of selfish utility, change to a moral sense? Perhaps the most pitiable instance to be found in human speculation of an attempt to dig down a mountain with a straw, is to be found in some thirty or forty pages of Darwin's writings, when he attempts to account for conscience or moral sense and moral ideas. When summed up, the first conscience was the result of the difference between a full stomach and an empty one. Darwinism is especially repugnant to every noble and elevated feeling on account of its degraded conceptions of the origin of our affectional, moral and religious nature. A shivering ape, crossed in love, or suffering with hunger, acquires a cousciousness of coming evil, and this is the origin of religion. Or he feared what injured him, and he became attached to what benefited him, as the dog does toward his master or enemies, and this is the beginning of religion.

Darwinism assumes that a brutal struggle for life is elevating, or that elevation came out of it. Our experience and our moral intuitions declare that it is degrading, producing ferocity, selfishness and brutality. It is only as existence, animal or human, is relieved from struggle for life, that there is elevation. Darwinism assumes that animalism, brutality and struggle for life are a means of elevation; or that progress is possible in them. Our moral intuitions and experience assure us that they are necessarily polluting and debasing in their tendency. The same fallacy is seen in its speculations in regard to physical improvement. The fighting animal becomes more ferocious, and the cur that has to struggle for life is the meanest of his kind. A certain amount of elevating effort is needed, but Darwinism knows nothing of this. It is struggle for life which is always debasing and repressing, to which it appeals. It assumes that evil and sin are means of progress, or that progress is possible in them. Experience and our moral intuitions declare that they are inherently, necessarily and invariably polluting and debasing. They are causes of degradation, and can be nothing else. It assumes that man has progressed in them, or by means of them. He has progressed only as he has rejected or abandoned them. It assumes that man could exist for a long time in a state of brutal, instinctive animalism, or brutal, idiotic savagery. Common sense says he would have perished in either condition. It makes man begin in such a condition, and progress in it, and by means of it, and out of it. Common sense says if he began in such a condition, he would have sank lower until he perished.

Darwinism makes a farce of our moral and religious nature. It has been cheating man for thousands of years with ideas that are the most palpable absurdities. It makes a cheat of our rational nature, for it denies its most catholic and fundamental intuitions. It ignores the regnant part of our nature, or makes a cheat of all nature. It denies the all-pervading law, order, system and plan, that pervades every atom, system and the universe. It fails to account for it, and renders it an impossibility and absurdity. It insults universal reason by denying teleology in nature. Operation of physical causes can not produce teleological results. They are mere conditions used by intelligence. The results are volition, thoughts, emotion and conscience. Darwin denies all teleology in nature—all that common sense has ever seen in nature, and in utter contradiction of his own language. The conditions assumed by Darwin, the power of adaptation to conditions, the production of variations in one direction, from lower to higher, from simple to complex, from useless to useful, the maintenance of these variations in a co-ordinated series, in an upward direction, and the law of heredity, which he relies on to preserve these improvements, are the very highest instances of teleology. He ascribes a teleology of a divine character to unintelligent conditions. Darwinism denies all causation, thus rejecting the fundamental conception of reason, science and philosophy, and a fundamental intuition of our reason. It protests against the fundamental regulative idea of science, classifying phenomena by means of ideal conceptions. It denies the essential characteristics of natural processes, order, co-ordination, adjustment and adaptation, in system, method and plan, exhibiting design, purpose, with prevision of, and provision for, all that exists, in accordance with law of highest reason. It refuses to recognize the realization of the highest conceptions of reason in nature, conceptions which alone can construe nature, and without which we could have no conception of nature. It ignores the highest and ruling part of nature. It drags man down to a level with the brutes. It makes every thing in the universe the result of mere force, physical force. It makes life the result of a brutal struggle for existence. It gives a low, brutal, violent, ferocious origin to every thing in nature, and to our highest nature. It denies, and would exterminate, the moral and religious element of our nature, for it deprives man of all spontaneity, will, and moral nature and character. Its legitimate results are seen in the new-fangled brutalities of cremation of the dead, and euthanasia or advocacy of suicide. To be consistent with its philosophy of the origin of life, society and all that exists—that they began in a brutal struggle for life, and are the result of the slaughter of all else by the strong, and the survival of strength and might, it ought to advocate the destruction of the sickly, the weak, and the unfit. The course of certain savage nations in destroying the aged and helpless, is the highest of wisdom, and if they are eaten, as some of them do, we have the most perfect realization of utility and of this new philosophy.

It makes fear, animalism, ferocity, and brutality the origin of all progress, and it can only lead to such results. It overlooks all rational, moral and benevolent factors in its theory of evolution. It has no place for mercy, pity, forgiveness, benevolence, love, saving the weak, sickly, deformed, pardoning the erring, and reforming and forgiving the sinning. Its theory of brute-force and the survival of the fittest, that is, the strongest, knows nothing of this. It makes of such acts a violation of nature and a crime. They are opposed to the law of nature, and to what produced and produces progress. The man who relieves the suffering, or the erring, or unfortunate, or elevates the fallen, or forgives and saves the sinning, commits as great a crime as the one who helps a criminal out of the hands of the officer of the law. It makes of patriotism, philanthropy, and martyrdom, lunacy and crimes. They are, in nature, opposed to all conceptions of this system, to its tendencies, and to its only logical conclusions. Do not say we are too severe. What is the origin and source of all progress, according to Darwinism? A brutal struggle for life. What is the source of all progress? A survival of the fittest, or a triumph of might. What is the controlling force in the universe? Irrational force. What is the end of man? Annihilation. What is the controlling principle of conduct? Selfish utility. Then what foundation for patriotism, martyrdom, or philanthrophy, self-denial, self-sacrifice, and self-abnegation? They are madness, if Darwin be true. Nay; they are a crime, for they are a sacrifice of the fittest for the unfit, and a violation of every principle of prudential or selfish utility—its highest principle. It would rob human nature of its most exalted features, and of its noblest ideas and aspirations, and strongest incentives to progress and elevation, the spring and fountain of all that is noble in humanity.

What would be the tendency of the reception of a system so brutalizing in its origin, and so materializing in its teaching, so hopeless in its conclusions? The leading sentiment of progress in all ages, the animating principle of reform, the leading themes of poetry, painting, literature, art, and thought in all ages, have been religious in origin and character. Would Darwinism give us a Homer, a Guatema, an Abraham, a Moses, a David, a Paul, a Socrates, a Plato, a Virgil, a Dante, a Milton, a Shakespeare, a Locke, a Newton, a Bacon, or a Washington? Would Darwinism have given to humanity an Iliad, a Book of Job, the Psalms of David, the Æneid, a Paradise Lost, and the immortal productions of poetry, painting, sculpture, and music? Would it give us the sublime morality of even systems of Paganism, the religions of China, Persia, Chaldea, Egypt, and Greece, or the divine morality of the New Testament?

Darwinism commits logical suicide, and refuses to accept its own standard, and the highest results of its own system of development. Man is the highest product of development, and his rational, moral, and religious nature is the very highest result of evolution. The rational, moral, and religious ideas of God, religion, creation, divine government, and providence, are the loftiest conceptions of man's highest nature, the crown of the pyramid of evolution. If evolution be consistent, true, and according to law, as the evolutionist claims, these intuitions are true, for they are its highest product or result. If they are not true, then the evolution that produced them as its crowning effort, is not reliable or consistent, is false and a cheat. If evolution be according to law, these ideas are the highest expression of that law. The evolutionist must accept them, or reject the law that he contends controls the universe, the only law he recognizes. By what right does the evolutionist reject these ideas, the highest expression of the only law he recognizes, and the crowning result of evolution? By what right does the evolutionist, taking human nature—human reason—as his standard, reject the highest and most universal intuitions of man's reason, and moral and religious nature, the regnant element in his nature?

Darwinism, also, is the destruction of all true science. It is a mere guess or hypothesis, and it substitutes speculation and queries for inductive reasoning. It rejects all the catholic and regulative ideas of reason, by which scientific labor is conducted. It rejects causation and all inquiry into causation, especially efficient and final causes, the real objects of scientific research. It rejects the great ideas of order, adaptation, adjustment, design, plan, and purpose, method, system, and law, of reason and thought as realized in nature. It rejects the rational ideas, connecting links of thought, which alone make the phenomena intelligible. It renders the course of nature a path along which mind did not travel, and renders the phenomena incoherent and unintelligible. It strips them of all connecting links of thought, and renders them incapable of being construed by mind. It substitutes minute observations and assumptions and speculations on them, for *scientific* generalizations, by means of catholic, regulative ideas of reason. It substitutes, gathering the facts of nature into bundles, and labeling them, and laying them away on the shelves of speculation, for broad induction and rational unitizing of them, by the regulative ideas of reason.

Tyndall's Belfast speech admits that evolution does not answer the question, "What is the origin or the ground of all that exists?"—admits that it ought to be answered—that the position of the positivist, that we should not concern ourselves with this question, is untenable, absurd, and one that it is impossible for the mind to accept—that the old position of the materialist, attributing every thing to blind, irrational matter and force, is absurd and indefensible—that with the materialist's former conception of matter and physical force, it is absurd to attribute all being to them. He has either to accept the theist's position, or attribute to matter more than the materialist has ascribed to it—he has to accept mind as the source of all being, or get up a new conception of matter. He attempts to evade theism by audaciously foisting into matter all that the theist attributes to intelligent cause, thus admitting that the ground or origin of all being must have all that the theist demands that it should have. He tramples under foot every principle of reason, when he attributes to matter what belongs to mind. He does not tell us how this wonderful matter came into being. Is this potency he claims for matter inherent or imparted? Is this potency intelligent or unintelligent? If intelligent, he has made a god of matter. If unintelligent, an infinite fetich. Will he submit his faith to the same test as he demanded in the prayer test? It certainly is as reasonable in one case as the other. Will he bring out of matter this potency or demonstrate that it is in it by actual experiment?

Then Darwinism does not rest on a single observed fact in nature; nor on an extension of such changes as are now produced back into the past; nor on an extension of such causes as now act back into the past. Nor can it point to a period in the past and say, "We can prove that such causes existed and operated then, as the theory appeals to," or show that such changes were then produced. The causes it appeals to exist now, but without a particle of its results. It is like the painter who was employed to paint the passage of the Red Sea by the children of Israel. When his employer came to see the picture he found it a waste of water and waves. He asked, "Where are the Israelites?" "They have gone over," said the painter. "Where are the Egyptians?" "They have gone under!" So Darwin's causes, like the Israelites, have all gone over, and his effects, like the Egyptians, have gone under. The denial of causation in these speculations has been often exposed. So also has the denial of intelligent causation. The utter abnegation of all reason and sense displayed in this, it is impossible to express adequately. Mrs. Stowe's Topsy has always been regarded as one of the extravagantly absurd and comical characters of literature, and the most absurd and extravagant of Topsy's conceits was, that "She never had no father nor mother. She just growed." But this most absurd and ludicrous of all extravagant conceits is now the quintessence of philosophy, and the *ultima thule* of science. Had Topsy just extended her philosophy to every body, and said, "Nobody never had no father nor mother. They just growed," she then ought to have been placed at the head of the evolutionist school of philosophy, as the Pythagoras of practical science, and her utterance would be the *ipse dixit* of the whole fraternity. "Nothing never had no cause. They just growed. They never had no author. They just comed!" Darwin seems to feel the pressure of this absurdity in starting; for he concedes the creation of a few germs, with an inbreathing of life, by the Creator. If this Creator be more than a mere metaphor or figurehead for his system, he concedes the whole question. He admits creation, the necessity of creation, as a starting point—the necessity of a creator to create that which is to be developed, and to inbreathe all that is to be evolved. The same necessity presses at every step in the process of development, and is evaded by covering up the evolution of every thing out of nothing, under an appeal to things as causes that have not a particle of causal efficiency in them.

We have already called attention to the jugglery with words and phrases played by this system. By means of this, all its assumptions and its continually begging the whole question are hidden. Take the phrase natural selection. It is used like the magic phrases of ancient magicians to conjure our universe into being. Natural selection does the work of infinite wisdom and infinite power. Darwin cheats his readers and himself continually with this mirage of his own brain. Selection implies intelligence. Selection is the act of intelligence. Hence, when we are told natural selection accomplished certain results, we are cajoled out of an appreciation of the absurdity of the assumption. Natural selection! What selects? Blind, irrational matter and force? If that phrase natural selection were cast to one side, and the phrase blind, irrational matter and force substituted, Darwinism would vanish like mist. By substituting a phrase implying intelligence, between us and matter and force, our reason is cajoled and cheated out of a sense of the absurdity of the speculation. If Darwin had been compelled to insert blind, irrational matter and force in his books, wherever "natural selection" and "nature" occur, they would never have been written, so gross would have been the absurdity, and they certainly never would have been read through, for every mind would have exclaimed as he read what was attributed to blind, irrational matter and force (and is now by the convenient personification contained in the phrase natural selection): "This man is mad, or believes all mankind to be mad. Blind, irrational matter and force do all this!" Let the reader then substitute blind, irrational matter and force for these convenient personifications of them, "natural selection" and "nature," and Darwinism will vanish like the fabric of a dream. Another caution. Let the reader as he proceeds in the investigation of the system, ask at each step, "Now how much of this is fact? How much is proved? And how much is assumed? How much is mere guess or speculation or wholesale assumption of the question?" And the system would vanish like a dream before a waking mind. Take the phrase protoplasm. In it is an assumption of a substance containing properties of both organic and inorganic matter. It is an attempt to evade and cover up a difficulty, and to bring together the opposite sides of the chasm between life and dead matter. But there is no such substance. Experience declares that organized matter, and organized matter alone, has some of these properties. Inorganic matter alone has others. They are never found together in the same substance. They are mutually destructive of each other, and antagonistic, and can not exist in the same substance. They assume the self-existence of matter and force, with all that exists potentially in them. Self-existent matter and force, in a state of endless progression, are something of which we know nothing. All progress we know or have any experience of, is in cycles. They assume an infinite susceptibility to variation and infinite conditions to produce variation. Of this we have no knowledge. It contradicts all experience, and knowledge. Darwinism sustains about the same relation to zoology and biology, that alchemy does to chemistry. The analogies of the development of the tree out of the seed, or of the man out of the ovum, furnishes no basis for evolution. Tree was potentially in the seed. Man was potentially in the ovum. We have observed such developments in countless cases for thousands of years. But in evolution things are evolved out of what does not contain them. Can not be proved to be in it. Are not evolved out of it in experience. The course of the seed and tree, ovum and man, is revolution in a cycle, and not evolution in an endless ascending scale. Evolution has never been observed in a single instance. Development of a germ furnished by an organism into a similar organism that was germinally present in it, is not similar to the evolution of any thing into something else not germinally present in it. They are not the same, but radically different.

Spencer gives a supposed case of an animal, that by some happenstance got an unusually heavy head, and then supposes that natural selection preserves it. He has to assume that such a happenstance was possible—that an animal could suddenly acquire a head unusually heavy. Then that conditions would be *co-ordinated* so as to preserve it. Experience teaches that nature would eliminate such a monstrosity. Then he assumes that all this would be transmitted; and then quietly assumes that the difference between the bison and the ox arose in this way. All that he can appeal to as really existing in all his assumptions would at best but permit such a phenomenon to exist, should it ever occur. Then he assumes that these conditions that merely permit existence are the cause of the existence. We have already often called attention to the fact that evolution makes causes of its conditions, when they have not one particle of causal efficiency. This is proved by the fact that they do not produce the same results at the present. Also, under the same conditions, precisely opposite results are produced. Common sense has ever said, "Like causes produce like effects." Modern science says the same causes produce exactly opposite effects. Inductive philosophy in the hands of Bacon, said, "Like effects must have been produced by like causes." Modern philosophy says precisely opposite results must have flowed from the same causes. Common sense says that the conditions, if causes at all, could not have produced such effects, and indeed must have produced precisely opposite effects. When pressed with these difficulties an appeal is made to unknown causes, and refuge is taken in ignorance. "We do not claim to know all the causes, nor all the effects of the causes known. Unknown conditions may produce the different results, or there may be unknown influences in the known conditions." Then when they present to us these now unknown conditions or influences, we will be bound to notice them, and not till then. A hiding in ignorance is an end to argument.

We object that conditions are not causes, but they merely permit results to persist when produced by causes. The results are of such a nature, and have such characteristics, that they could not have been produced by causes of the class to which they appeal; and the unknown causes or conditions, being of the same class, could not have produced them. The cause to which the theist appeals is not unknown or unknowable. It is adequate to the production of the phenomena. The characteristics of the phenomena demonstrate that the cause is of such a nature and character. The opposite of all this is the case with the evolutionist and his conditions. It is a favorite evasion of the evolutionist to represent the theory of creation as without cause, law, order, or use of means, and as in violation of all ideas of causation, law, order, and science. It gives the only cause adequate to the phenomena, and the cause that common sense investigating the characteristics of the phenomena says must have produced the phenomena. It gives an intelligent cause for the phenomena that must have been produced by intelligence. Creation is in accordance with law, rational law, and recognizes order, and gives order to the mental and moral phenomena of the universe. It gives a different cause, law, order and means from those presented by the evolutionist. It gives rational cause, law, order, and rational means, and use of means, as common sense demands. Materialism gives physical cause and law without lawgiver, order without mind, system without thought, and means that are not means at all, or that could not produce the phenomena, and common sense rejects them. The difference between the unknowable of Spencer and of the theist is this: The theist admits that he can not comprehend God, but he claims that common sense declares that the cause must have been an intelligent cause, and possessed in infinity certain attributes. He claims that he can, and does, apprehend the cause and his attributes, by the characteristics of the phenomena. Spencer denies these cardinal deductions arising from sound inductive philosophy. He makes the cause unknowable when the characteristics of the phenomena prove it to be an intelligence, and one possessing certain attributes.

When driven from other refuges the final one of Darwinism is a vast period of time. The causes are not observed to produce the phenomena now, and we can have no evidence for want of opportunity to investigate the phenomena, because the time required is so vast. Give the conditions sufficient time and they will produced the results. Now time is not a cause, nor a factor in causation. It imparts no causal efficiency, much less can it change into causes what have not a particle of causal efficiency. A western Indian once sowed a field with powder expecting to raise a crop. He reasoned like the evolutionist, that conditions, unintelligent conditions, would do what intelligence alone could do. When the pioneers laughed at him, had he replied, "Give my powder time enough and it will grow," he would have been a philosopher of the modern scientific school. Time will make powder grow as easily as it can make unintelligence produce intelligence, or what is destitute of life produce life. No amount of time can make matter evolve Darwin's primordial germ. The experiments of Dr. Bastian with the microscope demonstrate that the vegetable cell has a radically different structure from the animal cell. He clearly demonstrates:

I. There is no such primordial germ as Darwin claims.

II. That vegetable and animal cells are radically structurally different.

III. That organic nourishment will destroy vegetable cells and nourish animal cells, and inorganic nourishment will nourish vegetable cells, but destroy animal cells.

Hence, one can not be developed into the other, for their means of sustenance are different. What develops one, destroys the other.

But to call attention to all the assumptions of Darwinism, would be to repeat our course of argument already given. One inconsistency must be noticed. These theorists differ widely in their speculations and declarations, and yet we must accept them all unquestioned, although they are all contradictory, and agreed in nothing but the assumptions that their speculations are the truth and must be accepted.

Scarce one year has elapsed since the greatest of naturalists of our generation died. Though no bigot or theologian, and, indeed, rather rationalistic in his views, his testimony on this question as a man of science, was clear and decisive, and the more valuable because coming from one whose tendencies might be expected to be in the opposite direction. He declares that "Evolution should be confined to embryology, to the development of a germ into an animal or plant. There is no development of species. It is a closed cycle. The great archetypal ideas, the great types into which nature can be divided, never pass into each other. Each life is developed according to the law of its own species. There is no such law in nature as survival of fittest. Variations do not increase until they amount to specific differences. Sexual selection endangers existence as often as it accords with it. Geologic sequence is by successive steps, following an archetypal idea, and not by derivation. The most delicate forms have been preserved in geologic strata, hence we can not infer the disappearance of types to save a speculation. There is no evidence of derivation of higher from lower species. I believe that these correspondencies between the different aspects of animal life, are the manifestations of mind acting consciously with intention toward an object from beginning to end. This view is in accordance with the workings of our own mind. It is an intuitive recognition of mental power, with which we are ourselves akin, manifesting itself in nature. For this reason, more than any other, do I hold that this world of ours is not the result of the action of unconscious organic forces, but the work of a conscious, intelligent power. Nothing ever comes out of any germ but what was inherited from the parent, and consequently given to the first germ or first parent at creation. The universe is the product of conscious mind, and exhibits an intellectual unity, and not a material connection. The details falls to pieces if we attempt to test them by any such connection." Such is the testimony of the greatest naturalist of our age. It was to the Infinite Creator that he consecrated his school on Penikese Island.

We will dismiss evolution and Darwinism by applying to them the tests of inductive science:

I. The causes to which it appeals are known to exist.

II. They are known to produce such phenomena.

III. They are adequate to account for all the phenomena.

In applying the first test, the utter shallowness of these speculations appears in a glance. The conditions to which it appeals are not causes at all. They are not known to have existed, or to exist now as causes. Many of its causes never had, and do not have any existence, except in the speculations of these theorists. The very opposite results have arisen among these conditions. The second test is equally decisive.

Darwin, Huxley, and Thompson confess that these conditions have never been known to produce the results the theory ascribes to them. They are utterly powerless to produce such results. The very opposite results have arisen among them. The third test is equally conclusive. They utterly fail to account for a single item of the phenomena that really needs explanation. We have given over one hundred items, and the vital items of the problem that they utterly fail to touch. Hence, tried by these tests, these theories are utter failures. They utterly fail to account for the problem of being. They fail to meet a single demand of the problem. One who accepts them does so, not on account of incredulity, nor as an act of sublime faith, a sublime act of philosophic faith, as one tells us; but with the rant of the enthusiast: "I believe it, because it is impossible." If one wishes to see credulity and assumption and belief in utter lack of testimony, belief in violation of reason, and in opposition to testimony, let him read these speculations.

We will now devote a few pages to a review of the theory of historic development, of which we gave a brief ontline in a former chapter. One of the issues at the present time between the skeptical and the religious world is, "What was man's primitive condition?" The Hebrew rabbins taught that he began in a state of almost divine vigor of mind, with super-angelic intelligence and knowledge, and that none of his posterity have ever equaled him in knowledge or intelligence. The religious world have generally adopted more or less of this theory, and it was a favorite position of the late Alexander Campbell. The evolutionist runs to the opposite extreme, and claims that he began in a state of brutal, instinctive animalism, as a development from lower orders of animals, or a state of brutal, idiotic savagery as a development from lower and animal-like types of the *genus homo* now extinct. Neither of these theories are correct. They are assumed because the necessities of the systems of these advocates demand them, and not because of their proof or truthfulness. They are not based on a careful examination and induction of the facts of the case, and these facts, properly interpreted, clearly disprove them. Experience declares that if man ever were an animal, he would have remained one, for there is no spontaneous progress of animals. If not an animal, whence came the difference between him and animals? The fatal fallacy of this whole theory is that it assumes that brutality, pollution, and animalism are elevating. If man ever were in such a condition, and an animal, he would have remained in that condition forever. If he were in such a state, and a man, brutality, pollution, and animalism would have sunk him lower. So teaches reason, experience, and common sense.

The opposite theory of the rabbins is as untenable. Knowledge is acquired by experience, and comes through an exercise of the senses and faculties of the mind. The first man had neither of these, and was without knowledge, and the society and civilization based on such knowledge. The scriptural account clearly teaches that man had not knowledge sufficient to make garments for himself, and had to be taught language, agriculture, and the nature and uses of animals. The theological notion is fabricated to sustain the theories of original sin and Adam's federal headship. Adam is endowed with super-angelic ability and knowledge, and with great theological knowledge. He knew he represented the race, and that he chose for them, and what would be the results of his conduct. The Scriptures really teach nothing of such speculations. The entire account of the creation of man, his history in Eden and the transgression, is simple and childlike. It teaches nothing of the tremendous effects of the transgression on man's nature immediately after the transgression, or on nature at large, that we meet in theological speculations. All these speculations concerning man's primitive condition, and these tremendous and elaborate theological systems, are not even hinted in the Scriptures. The scriptural account agrees with the analogies of geology. Man was created physically, mentally and morally pure, and more vigorous and active than he has been since corrupted and depraved by violation of law. But he began in a condition of child-like ignorance, innocence and simplicity. The cradle of the race was in western Asia. Man had one common origin in ancestry, one common language, one set of historic traditions, that obtain, or at least traces of them, all over the earth. There are a number of primitive historic religions. These have certain historic traditions in common. These common historic traditions and religions are based on a common substratum of truth, and are various versions of this basis of truth, more or less corrupted by tradition. Among these historic traditions are creation, primitive innocence, angelic intercourse, longevity of the race, instruction in language, arts and knowledge, violation of law, loss of innocence, angelic intercourse, and of longevity. These are found in all old religions, all over the earth, and can be traced back to one common origin—back into the cradle of the race, and are based on truth.

All languages can be traced back to root languages. Of these there are but a few, and they can be traced to one common stock, or proved to have had one common origin, or central, or basis language. These root languages can be traced back to the cradle of the race, and originated in it. All races can be traced back to one common stock in the cradle of the race. These historic traditions can be traced back to one common origin and starting point in the cradle of the race. All religions can be traced back to one parent stem, and to the cradle of the race. These historic traditions and religions place man before us in a state of purity, vigor and intellectual power, and with elements of society, knowledge and civilization. They have absolutely no traces of primitive savagery and brutality, such as are depicted in the theory of historic development They place man before us in the enjoyment of a simple, primitive civilization, family, government, society and arts. The primitive nations used metals at the time of our first historic knowledge of them. It is assumed that, back of all this, there was a long period of brutality and savagery, and a stone, a club and animal age or ages, when men used stone implements, clubs, and lived like animals. There is not one particle of evidence that such states preceded the use of metals, for we find man using metals in our earliest historic knowledge of him, in the cradle of the race. No instance of spontaneous elevation from these lower states of society can be given. We have not one scrap of evidence that man passed through an animal, a club-using and a stone-using age. The speculations of Lubbock and his school are as destitute of any foundation in established fact as the tales of Gulliver. Their theory demands that man began in the lower animals, and passed through these lower stages of society; and it is assumed that he has done so, and we have descriptions of man's passage through them, as positive and circumstantial as though these speculators had lived through all these ages, and witnessed all that is described on the pages of their fictions. Neither archæology, nor comparative philology, nor historic traditions, nor historic religions will sustain any such fabrications. The best method of meeting them is to ask these romancers to present proof for their assertions. These states of society have existed cotemporaneously in all human history. All the instances of such society, that come within our knowledge, have been since the civilization of the older nations, and their use of metals. They are degradations of man, and not his original condition, as his traditions and religious ideas, which he retains after his descent into them, clearly show. Also his brain is far larger than his condition in such states demands, and proves that such states are a degradation. His languages and ideas, that he ascribes to his ancestors, are above his condition. They have never been brought up out of animalism, but have been dragged down into savagery from higher conditions. The traces of man in caves and in the *debris* of villages on the sea shore, or in lakes where man built villages on piles over the water, have been assumed by evolutionists to be anterior to the historic period, but there is not one particle of evidence to sustain such a position; for we have cave dwellers and lacustrine villages, and such states of society now, and have had during all history. Then the tumuli of Denmark, and the lacustrine cities of Switzerland, and every instance of such remains relied on by the evolutionists, have been brought within the historic period. The most reliable instance, as they claimed, was, by Dr. Andrews, proved to come within 2,500 years. We repeat that the assumptions of the age of these remains, and the assertions of evolutionists, that man has passed through such periods, are without any particle of proof.

The assumption that man has passed through a period of animalism, without religion, into an animal-like dread of what injured, or an animal-like liking for what benefited him, such as the dog feels towards his friends or enemies, into fetichism, and out of that into polytheism, and from polytheism into monotheism, is not only without proof, but contradicted by all the facts of philology and comparative language, comparative religion, historic religions, historic traditions and archæology. All historic traditions point back to an original condition of primitive monotheism. All root or historic religions point back to a simple monotheism, back of them, and from which they were derived by a corruption of the original monotheism. All root languages are monotheistic in their oldest religious terms, and names of God and religious ideas. The primitive and root idea of all such words is monotheistic. The historic traditions of the world point back to a period of monotheism, and contain traces of it. Monotheism was the esoteric doctrine of the Indian, Iranian, Chinese, Chaldean, Arabian, Egyptian, Phœnician and Grecian priests. So also it was of the Druids and higher priests of northern Europe. All the intelligent nations of Africa, even the Hottentots and Caffres, have, back of their idolatry, a Great-Great or Supreme. The American Indians, back of their superstitions, have a Great Spirit. These ideas were not reached by an ascent through fetichism and polytheism, and by speculation, not even in the case of Asiatic, African and European philosophies, but were retained from a primitive monotheism, after the mass of the people had sank into polytheism and fetichism. The Chinese teachers, Indian priests and philosophers, the Iranian magi, the Chaldean and Egyptian priests and the Grecian philosophers, all say they have these ideas from their ancestors, the fathers of the race. In the clearest and best reasonings of Socrates and Plato, they appeal to what has been handed down from the fathers of the race. The terms they use are found in the root words of their language, and their ideas and words correspond with the root ideas and words of these root languages, the source from whence they say they obtained them.

Fetichism is not peculiar to lower stages of society, for some nations have been fetichists, although highly civilized in other respects. Nor is fetichism peculiar to the earlier periods of history, or the earlier portion of the life of our race, for some nations are fetichists now. Again, monotheism existed, as we have shown, at the earliest historic period of our race, and was then the common belief of all mankind. Again, monotheism is not peculiar to higher or civilized states of society, for comparatively rude tribes have been monotheistic. Nor is monotheism the product of late states of society and advanced states of society, for it was the common belief of the race at the beginning and of the simple state of society prevailing then. As man progresses in civilization he does not spontaneously cast to one side fetichism or polytheism, or spontaneously advance into monotheism. Nations have retained one or the other of these types of religion throughout great changes in civilization. Again, comparative religion, or an investigation and comparison of all religions, proves that all religions, except the Hebrew and Christian, are purer and simpler the nearer we approach their origin. As we trace them away from their beginning they become elaborate, corrupt, formal, ceremonial and external. As men have advanced in civilization they have not emancipated themselves from impure idolatry, but have become more profligate and corrupt, until the corruption and effeminacy of their religious and moral nature have affected their rational and physical nature, and they have sunk into barbarism. Nothing can save man from this but a pure religion. Such a religion he can not devise for himself. It must be revealed. Man's corruption of all religions and the corruption of all his attempts to construct religions, prove this. Nations have sunk into polytheism and fetichism, as they relapsed and sank in society, civilization and government. They will ever do so without the regulative control and the lifting and sustaining influence of a pure religion, as a dynamic force in national life, originating this progress for which the evolutionist contends, regulating and directing it, urging man upward, and sustaining him in his progress. Religion is the regnant element in man's nature. It is the origin of his noblest aspirations and enthusiasms. It is the principal source of that progress for which the evolutionist contends. It is the regulative force of that progress. It is a lifting power in it, and the sustaining and cheering influence in it.

Then there is absolutely no proof of this theory of historic development. On the contrary, all the known facts disprove it. This theory of historic development is assumed as a necessary part of the theory of evolution, and assumed because it is necessary as a part of that theory. There are an excess of credulity and a perfect romance of faith exhibited in building it up on the small basis there is for it. The whole theory of myths, and the mythical origin of religious ideas, is as wild and extravagant as the tales of the Arabian Nights. A few facts, a few jingling analogies in words or their meaning, and out of these is built a system, like the palaces of the mirage of the desert, and about as real. While Max Müller and his school are doing a great work, yet their theory of myths, and their speculations on them, almost render nugatory the good they are doing. To use an expressive Westernism, "They have myth on the brain," and have made a most extravagant myth of their speculations Time will dissipate the mountains of dreamy speculation under which the results of their labors are buried, and leave us a residuum of truth. The same is true of Lubbock and his school. He has gathered a mass of curious facts, and his speculations have about as much basis in them as astrology had in the facts of astronomy that were perverted in it. His whole theory is built on assumptions foreign to his facts, and utterly unsustained by his facts. He assumes his theory, and then weaves his facts into the elaboration of the theory, and assumes the place they should occupy in time and sequence, just as ancient speculators built up *a priori* their theories of the universe. The facts of his volumes, when examined apart from his theory, have no proof of it.

There are certain religious ideas, traditions, rites and ceremonies that are found in all, or nearly all, religions. It is a mooted question how they had their origin. Certain theologians claim that without revelation man would have had no religion or religious ideas. This is virtually saying that man has no religious nature. It virtually assumes, also, that revelation creates or implants within man his religious nature. It destroys all accountability and responsibility. It also renders revelation impossible, for if there be in man's nature no religious element on which revelation builds, on which it is based, and to which it appeals, revelation is absolutely impossible. An attempted revelation would be like singing for a deaf man, or painting a picture for a blind man. This position contradicts reason and the facts of history, geography and experience, and the express declarations of the Scriptures. The opposite extreme assumes all religion and all religious ideas to be entirely of human origin. The common historic traditions that we have enumerated, the common religious rites and ceremonies, and the important and essential features in which the Scriptures differ from other religions, can not be accounted for in this way. Theologians often claim that all religions, and religious ideas, are perverted plagiarisms from the Bible and its religion. This can not be the case with the religions of nations that never had any acquaintance with the Scriptures. Nor with nations that can trace the origin of their religions back to a period antedating the composition of the Scriptures. Nor can the opposite extreme be sustained, that the Scriptures, and the religion they inculcate, are the outgrowths of pre-existent paganism. The pre-existence of paganism, before the primitive monotheism described in the Book of Genesis, must be established by the skeptic. This can not be done. On the contrary, it can be positively and clearly shown that paganism is a perversion of that original primitive monotheism. He must also establish the fact of the plagiarism, and not assume it. Showing that they have common features will not accomplish it. It can be shown that the Chinese had elementary notions of nearly every important invention and discovery of modern European genius, and long before them, but every one knows there was no plagiarism. The true position is, that man had a common origin, language, stock of historic traditions, religion, a simple monotheism, based on a common revelation. This accounts for common historic traditions, rites and ceremonies. Man's nature is the same essentially the world over. His moral and religious nature works out the same great ideas, with common characteristics in the results.

These two facts will account for the catholic features of all religions. As revelation and religion must be based on man's nature, and in accordance with it, revelation would also have these common features and catholic ideas. Indeed, the work of revelation is to elevate, purify and perfect these great ideas of man's religious and moral nature on which it is based and to which it appeals. Hence, common historic ideas, common rites and ceremonies have their origin in common primitive monotheism and common historic traditions, and common primitive revelation. Common catholic ideas have their origin in common religions and moral nature, and common tradition from common primitive monotheism, based on common primitive revelation. Neither extreme is true, but the truth lies between them.

Another error often met in the theological world, is that the true religion must be and is utterly foreign and repugnant to our nature. Certain theologians seem to think that the truthfulness and divine origin of a religion, or of a religious idea or system, can be measured by its repugnance to our nature, and the rebellion of our nature against it; just as certain doctors used to measure the excellence of their drugs by their nauseousness. If a doctrine be of divine origin, it must be foreign and repugnant to our nature. If reason and nature rebel against a dogma, the reply is easy, it is to be expected, and, indeed, necessary, and an evidence of its divine origin. The rationalist accepts the assertion that religion must be foreign and repugnant to our nature, and argues that this proves all religion to be inimical and hostile to our nature, and false.

The truth is that revelation and religion, to regenerate our nature, must be based on it and in accordance with it, appealing to it, and allying themselves with it, elevating and purifying it, and restoring it to its legitimate use. On the other hand, they are and must be opposed to and repugnant to the depravity and perversion of our nature in sin, and the corruption resulting from such perversion. Another extreme is, that religion must be exclusively and entirely of divine origin, and revealed to benefit man. If at all human, or having a human element, as far as it had such human element it would corrupt man. It must have a human element and a human side to reach man and influence him, or the Christ never would become the Son of man, God manifest in the flesh. The rationalist, taking the position that religion must be entirely revealed and foreign to man, concedes its truth, and then he retorts on the religionists that such a religion would be enslaving and degrading in its influence on man, overpowering in its influence, and destroying his individuality. Some contend that man needs and should have no religion. Some concede that he needs a religion, but contend that it must be entirely of human origin to be received by man, and benefit him. The true position is, that religion must have a human and a divine side or element. It must be based on man's nature and in accordance with it. It must also be a lifting force, and a standard; and to be such it must emanate from a source above man, and then it will aid and elevate him, and be to him an objective standard of conduct and truth.

Another mooted question is, Did the writers of the Bible and its religious teachers ever borrow from other religions and systems? The idea advanced by some religionists, that there was no borrowing, and which they think is necessary to be maintained to maintain the divine origin, sanctity, superiority and authority of the Bible, can not be sustained; nor can the skeptical idea that it is all borrowed. The patriarchs had the common monotheism based on a common revelation, preserved by tradition until the choosing of Abraham. The Egyptians had truths, and religious ideas and ordinances, retained from primitive monotheism. So had other nations. Man's religious nature had wrought certain things that were good. Moses took any thing that was good out of any of these, removed errors, and incorporated them into Hebraism. A very large element of Hebraism was retained from primitive religion, existing before its day, and taken from surrounding systems, and corrected and made fit to be used, and then incorporated into Hebraism. It is not necessary to the divinity of Hebraism, or Christianity, that they be entirely new and all revealed. The prophets took truth from the Persian and other systems. Christ and his apostles took truths from the Essenes, and Grecian and other philosophies. God was not under the necessity to work a miracle to produce a needed idea or truth, when it was already in existence. Christ accepted and used all the truths of the Pharisees, Sadducees, and especially of the Essenes, in his teachings. Overzealous and misguided friends and bigoted enemies should be willing to have the God of revelations use common sense, like other intelligent beings, in his work of revelation.

But to return to our question after this digression. The scriptural account of man's primitive condition is rational, simple, natural, and is common sense. It agrees with geology, which teaches that each species was created perfect in its kind at first. Man was physically, mentally, and morally more pure, vigorous and acute than he has been since he has been corrupted and injured by sin. He was a direct creation, as geology teaches all species to be, and as the immense chasm between him and lower animals declares. He was created a full grown man and woman, as he must have been to have existed at all, but was in a state of child-like ignorance, innocence, and simplicity. He had angelic intercourse, instruction, as he must have had to preserve his existence and to take care of him at first. He had teaching in language, agriculture, and in the use and nature of animals, and in protecting himself from the elements by clothing and shelter. He was taken care of in his primitive ignorance and simplicity, and taught to take care of himself. He lived longer than he has since his physical nature was corrupted by violation of law. He had a simple, child-like government, or control over him, in simple commands, designed to cultivate an obedient and loyal spirit in him, and disciplinary in character. He transgressed law, sinned, and fell. He lived a long time, in consequence of pristine vigor of body, for some generations, but gradually lost this longevity and vigor of body. He lost angelic intercourse. He had one language, one religion, a simple system of monotheism, based on a simple, brief revelation, through inspired men, and one set of historic traditions. There was a rapid civilization, in consequence of man's great longevity and pristine vigor. There was an urban civilization, with early use of metals and mechanic arts, and music and refinement, in the family and descendants of Cain. Pastoral simplicity and comparative purity in the descendants of Seth. Man had simple government and family society and arts in the very infancy of the race. Such was the antediluvian history of our race, which lasted sixteen hundred years at least, and, perhaps, several thousand years.

Noah's descendants had all these advantages, and started even above the condition of men before the flood, for Noah was evidently a prince among men before the flood. The descendants of Noah separated into families and tribes and nations. These families migrated from this common cradle of the race, in all directions, into all portions of the earth. They took with them dialects of this common language, and elements of this common religion, traditions and civilization. They built up empires, civilizations, religions, science, and arts, such as the Chinese, Indian, Iranian, Chaldean, Hebrew, Egyptian, Phœnician, Pelasgic, and Eutruscan, and of the offshoots or successors of them, the Grecian and Roman. From one language sprang the root languages and their dialects—from one religion, this primitive monotheism, sprang the earlier historic religions and their offshoots. There arose among these peoples leading minds, that constructed national religions out of this common monotheism, or what remained of it, and its historic traditions. All these old religions were based on the common primitive monotheism, and contained more or less of its truth, and the common historic traditions of the race. Physical surroundings and inherent family characteristics influenced and modified these developments. As these master minds were above the national mind and life, so were these systems when constructed, and there was growth and progress until the measure of the religion was filled. Then this religion either petrified and fossilized the national life, as in China and India, or the national mind cast it off and launched out into skepticism, as in Greece and Rome.

In early generations, man had and could have only anthropomorphic ideas of God, just as the child can have only such ideas. Revelation had to be anthropomorphic and symbolic and of the character of object lessons. It was only by symbols and object lessons that man could be elevated and educated up to an apprehension of spiritual ideas. Hence, there was a tendency toward idolatry. Man was conscious of his sinfulness. He did not like to retain, in his thought, the idea of a sin-hating and sin-punishing God. He dreaded and disliked to think of God's purity and holiness and justice. He stripped God of these attributes, and made him like himself, and began his descent from monotheism into idolatry. The Semitic nations separated God's attributes from Himself, and personified and deified them. Aryan nations took the great forces of nature as representatives of the attributes of God, or God himself, personified and deified them, and lost sight of the real object of worship, and worshiped the symbol. There has been a continued descent and corruption of religions. They are simpler and purer the nearer we approach their origin. As we pass down from this, they become formal, elaborate, ceremonial, and corrupt.

Each nation had to solve the problems of arts of life, useful arts, fine arts, government, ethics, science, philosophy and religion. Inherent characteristics of the race or family, climate and physical circumstances, the character of master-minds, all influenced the solutions, each nation gave to these problems, and determined which ones they made most prominent. Some gave prominence to some of these problems, and others gave more prominence to others. Each nation gave a peculiar solution to each problem. The Chinese were political economists; Indians were ideal philosophers, speculators, and dreamers; Chaldeans were warriors and empire builders; Phœnicians were navigators, merchants, and mechanics; Egyptians were agriculturalists, architects, and builders. The Greeks were almost cosmopolitan in character, in consequence of the character of the country, which combines nearly all the features of the world, and their position and intercourse with the world, and openness to its influences. The Romans developed municipal government and law. The Iranian people came nearest to an approximation to pure religion, and the Arabians retained the old pastoral simplicity and primitive religion longer than any other people. To the Hebrews was committed, by divine providence, the solution of the religious problem of the race; and, among them, was developing, by divine providence, the religion for humanity. Other nations were, under divine providence, developing great truths in science, arts, politics, ethics, and philosophy.

A many-sided development of all of these was thus secured. The race was advancing and preparing great truths to be used by the whole race, and by the universal religion designed for the race. Man had tried, by unaided human reason, to solve for himself the moral and religious problems of the race, but had failed. Great truths had been but partially apprehended. They were corrupted by error and perverted. Man had failed to reach universal truths and principles in religion, and especially to reach the great central truth of all religion. The human heart was driven back on itself in despair. The great ideas reached in science, arts, and philosophy, and the various developments of these, and the failure in religion and morals, were a part of the great preparation for the universal religion. God had chosen the Hebrew family, and to them he committed the solution of the religious problem of the race.

In educating a nation, we should have normal schools for the education and preparation of teachers. We need a developed, completed system of instruction to meet and overcome error. We need educated, disciplined teachers, a perfect system, and pupils prepared to receive instruction. God chose the Hebrew family because they were better suited to his purpose than any others; were a simple, pastoral people, less corrupted than other tribes, and had retained purest the primitive monotheism which God had given to the whole race, and which the race had more or less rejected and corrupted, and wandered away from God into idolatry.

He used the Hebrew people as his normal school. He developed his religion into a perfected system, ready to encounter error, and to meet the wants of the race, and by means of this development, and while developing it he prepared the Hebrew people to be the teachers of the race. The Hebrew religion alone became purer as it was developed; it alone was a progressive religion; it alone was always in advance of the national life, leading it onward, and calling it up to a higher life; it alone began in rude and elementary ideas, and developed into a system of eternal, general principles, and universally applicable truths. In Christianity all the great catholic ideas of religion have been developed and perfected. In it the great ideas of all religions are stripped of error and perfected. It is a *pleroma*, fullness of all religious truth. It is a religion of eternal and universally applicable truths and principles. God was in the Hebrew history, developing their religion into a universal religion for all men, and preparing the Hebrews to be its teachers, while he was in his providence preparing the world to receive it when perfected. He did not abandon all mankind except the Hebrew people to themselves. He did not curse all mankind, and inflict evil on them, and evil only. He was in human history in his providence, ruling in and reigning over it, bringing out beneficial results, and preparing them for the perfect religion, and to be brought back to himself in the fullness of times. He was the Father in heaven of the nations, although they knew it not, and had forgotten him, and knew him not.

The Bible does not teach that all the revelation that God gave to man, all revealed ideas, are recorded on its pages, are even mentioned in it historically. There was revelation before Moses—a revelation that God did not embody in the Pentateuch. There were remains of this revelation in all old religions. The Vedas contain remnants of revelation, so does the Zend Avesta. During Hebrew history God did not confine all inspiration and miracle to the Hebrew people. No thoughtful, devout mind dare say there were not glimmerings of divine light, influences of God's Spirit in the soul struggles after God, in the life of a Guatema, a Plato, and others in heathen nations.

Then there has been historic development in certain nations; none in others; and degradation in others. There has been, on the whole, a historic development of the race. Religion has been the ruling element, the originating, leading, lifting, and sustaining power in this development. All poetry, fine arts, literature, ethics, government, and progress have been based on it, and have sprang out of it. Religion has not been an obstacle that has fettered progress, but has been its spring and source. We have an illustration of what a godless positivism will do in China. An atheistic, godless system of positivism has deprived the national mind and life of the upward, energizing tendency, the lifting and sustaining influence of religion, and it has fossilized into a mechanical, heartless, automatic system of routine. Development and progress are not towards atheism, but toward a purer and better obedience to a perfect system of religion. Progress does not change man's nature, but develops it, hence it will not eliminate all religion out of man's life, or eradicate his religious nature; but develop it towards perfection. Man's religious nature will ever be the regnant element in his nature, and the source and ruling force of all progress. Christianity is a system of eternal, general principles and universally applicable truths, that man can not outgrow. He may and will learn more of the infinite scope of its eternal, universal truths, and how to apply them better in regenerating his life, but he can never outgrow them, or the religion in which they are embodied.

GEOLOGY NOT A SCIENCE.

We will close this chapter with a few observations on the relation of science to the Scriptures, and especially of the so-called science of geology, which has been the field of attack on the Scriptures and religion for over a century. We think that the following principles should be accepted by all persons, and should control all alike:

I. There is such a thing as truth. There is truth in science and there is fact in science.

II. There is in the mind of man that which responds to the truth—that to which the truth appeals, and on which the truth is based in its action on the mind.

III. To be received by the mind as truth, the idea or statement must be perceived by the mind to be a truth or a fact.

IV. There is a distinction between truth and falsehood, and this distinction is based on the nature and necessary relation of things.

V. There is in man that which responds to this distinction between truth and falsehood.

VI. A revelation from God will not contradict any truth, on any subject whatever, no matter how made known.

VII. All truth being grounded in the nature and necessary relation of things, must be accordant and consistent.

VIII. If a system or statement pretending to be a revelation from God should contradict any clearly established truth, man could not and should not receive it.

IX. A revelation on the same line of subjects as truth already known, will agree with and not contradict it.

X. If a revelation speak on any subject, no discovery of science, or fact of science or truth of science subsequently brought to light will ever contradict it, if it be a revelation.

XI. No pretended revelation can be true which contradicts any well established fact or truth of science.

XII. While it may not be the object of revelation to reveal science, and we should not expect a revelation on religious topics to do so, and while it may use popular language and terms that are not scientifically correct, yet when it makes an explicit statement involving any fact or truth in science, it should be in accordance with established truths of science.

XIII. Reason must be our ultimate standard in this matter, for reason has to determine whether God has ever spoken to man, and which of the pretended revelations are the true one, and then what has been spoken.

XIV. By reason we do not mean the peculiar notions and ideas of each individual. Revelation may and must contradict all errors of a mistaken reason.

XV. If the Scriptures are inspired, they are infallible and sacred, but no interpretation of them is infallible or above criticism.

XVI. Men have erred in interpreting the Scriptures, and have generally interpreted them to suit their own views and prejudices. There is no error, no matter how gross, or sin, no matter how vile, that has not attempted to shield itself behind interpretations of the Scriptures, and claimed that it was above criticism, because it had taken such a refuge.

XVII. The Scriptures have suffered more from such interpretations, than all other causes combined. Criticism, and even skeptical criticism, has done scriptural interpretation great service in pointing out such errors. Having conceded this much to the demands of reason, we lay down the following principles that should be accepted on the other side:

I. Any scientific statement, or any conclusion or deduction in science, must be clearly proved and established, before any one can be required to accept it as a fact or truth.

II. If an attempt be made to array any deduction or conclusion of science against religion, it must be clearly shown that the premises on which the conclusion rests, are facts or truths, and, above all, that the conclusion logically and necessarily follows from the premises.

III. No one need spend one moment to defend religion or the Scriptures from attacks based on mere hypothesis.

IV. While science in the true sense of the word might overturn what claims to be a revelation, mere hypothesis, as a basis for an attack on such revelation, is not worthy one *moment's notice.* Then what are the claims of geology to consideration when wielded in attacks on the Scriptures? We reply that, in its present condition, geology is not worthy one moment's notice, from the very simple fact that geology is not a science, and has not a single claim to the appellation science, and what is wielded against the Scriptures is mere hypothesis. This may startle some persons, and will doubtless provoke the ridicule and sneers of others, but what are the facts? What is science? Science is truth classified and systematized by means of certain great truths or principles on which each truth and the whole truth of the system are based, and which express the relation of each truth to the system, and to each other. To thus systematize and classify a series of correlated facts and truths, we must have certain great rational conceptions that are our basis of classification, and are our guide in classification. The growth of each science has been thus. Men have observed phenomena, and have guessed at them, at their cause, and have gotten up hypotheses on which they have arranged the phenomena, as beads strung on a string. Soon, however, a phenomenon would be observed that would not string on the hypothesis, and the hypothesis would be thrown away, and another devised and substituted in its stead. Thus slowly and painfully often men toiled towards the great underlying principle—the great central idea of the phenomena, and when at last this was discovered, a science was possible, and not till then. When truth was reached, all the phenomena would crystallize around it into a system or science, because the basis of classification was reached, and the guide in classification was known.

Before the discovery of this rational conception, this central idea or underlying principle, the phenomena were merely placed in juxtaposition or mechanically mixed. Such is precisely the condition of geology now. An immense mass of facts has been observed and recorded. The principal facts observed are superposition of rocks and earths—the rocks that are found in connection and the relative order of position, or the order of succession, it is claimed—the remains of species of animals and plants now extinct are found in these strata—certain remains are found in certain strata and not in others—

great catastrophes have characterized the former history of our planet, and that it has undergone great changes, and that there has been a succession of types of existence, and a progression in such succession. All attempts that have been made to classify these phenomena and reduce them to a system, and all theories concerning their origin and age are mere guesses, mere hypotheses. They are called hypotheses by geologists themselves, and it is just these hypotheses and deductions based thereon, and especially the latter, that are wielded against the Scriptures. There is not one fact—one observed phenomenon of geology—that has the slightest conflict with any statement of the Scriptures. The conflict is with the guesses of geologists as to the cause of the phenomena, or their age, or relative order of succession. There is not one geologic hypothesis now accepted that has stood the test of a score of years. There is not one geologic theory or hypothesis that may not be overturned to-morrow by the discovery of some phenomenon or fact now unknown. Over one hundred years ago the French Association of Science published a list of over eighty geologic hypotheses that had been accepted for a time and then exploded and abandoned. Over twenty years ago Lyell added fifty to the list, and as many have followed since that time. We can safely say that within the last one hundred and fifty years over one hundred and fifty theories or speculations have been suggested as hypotheses in geology and exploded and abandoned. Many of these were the fundamental ideas of geology in their day, and were urged as established scientific truths, and most of them were arrayed against the Scriptures, and men were arrogantly called upon to cast to one side the faith of ages because it did not accord with these guesses that their advocates have since abandoned, and some of which they would blush to have attributed to them. These conflicting, changing, inconsistent speculations have each tried to act usurper in its ephemeral moment of existence, and then given place to some new pretender. Instead of learning modesty and sense from such failures and inconsistencies, the geologists have been captivated by each new chimera and have, if possible, become more dogmatic, arrogant and presuming.

Prominent among these exploded theories are the nebular hypothesis, the plutonian hypothesis of the origin of some rocks, or that they are cooled, melted matter, the neptunian hypothesis of the origin of others, or that they were deposited by water, and most notably the theory that the center of the earth is a melted, fiery mass. We have already stated many of the objections that can be urged against the nebular hypothesis. When applied to account for the origin of the earth, it is open to many more insuperable objections. It is assumed that the matter of the earth was once a mass of superheated gaseous matter, so highly heated that all the matter now aggregated in it was once an intensely heated vapor or gas. All the elementary substances were either mixed in a chaotic, turbulent mass, or were evolved out of it. Now, as a matter of fact, we have no experience or knowledge of such a substance as an intensely heated nebulous vapor or gas, or of solids formed from such nebulous heated matter or gases. Gases come from solids in combination, or from compounds formed by chemical action, and arise from combustion or chemical action. There is no instance of gases spontaneously condensing into solids, or uniting to form solids. If the elementary substances were once mechanically mixed, the present compounds formed out of them are inexplicable. These elementary substances did not unite into compounds according to greatest chemical affinity, as they must have done had they ever been mechanically mixed. Then, why was not chemical affinity active when matter was in this heated mixture? Why was it latent? Chemical action is produced and intensified by heat, in the case of many of these gases or elementary substances. As these elementary substances cool at widely different temperatures, why did not those that cool first arrange themselves in masses? Why not those that became solid first gravitate toward the center? Why not all that are heaviest be near the center? How could substances that cool at widely different temperatures be mixed, as they are now, all through the crust of the globe?

How could water enter into the structure of rocks that cool at a temperature that would convert it into super-heated steam? If heating the rock will expel the water in steam, long before the rock is melted, how could water be incorporated into the rock when cooling? Water could not have entered into such rock when crystallizing from a heated mass; and as they are now cyrstallized, water is essential to their present crystallization. If the earth ever were a heated mass of liquid, the sun would have caused, twice every twenty-four hours, tides at least sixteen feet high. The rocks never could have crystallized when they were thus constantly and violently disturbed, for crystallization requires profound calm.

What are called metalliferous rocks, rocks that have metals mixed in their composition, are an enigma. Had the rocks been once melted, the metals that are heavier than they, and melt long before they do, would have been in masses by themselves, and not mechanically mixed, as they are now. Melt the rock now, and the metals run off in masses, long before the rock is melted. Had the rocks been once melted, would not the metals have remained a liquid, and often a vapor, long after the rock became a solid in cooling? How could arsenic and mercury, very volatile substances, be mixed with metals that do not melt until long after the mercury and arsenic have been converted into vapor? Would not they have remained a vapor, long after the other metals had become solids? Platinum is a rare metal. There are four other metals that are very rare, and are found only in compounds with platinum. How came these rare metals to be mixed, especially since platinum melts only with intense heat, and these metals vaporize long before that point is reached? All these facts are in direct violation of every principle and fact of mixing and cooling melted matter. Another fundamental position of geology is that granitic rock is of igneous origin, or is the result of cooling melted matter. In direct contradiction of all this is the fact that graphite is found mixed in granitic rock, when graphite vaporizes long before granite melts. Had they been melted once, graphite could never have entered in mixture into granitic rock, for it would remain a vapor long after granite became a solid.

Mica-schist is an ingredient in granite, and a granitic rock. Water-marks have been found in its structure, which never could have happened had it been a melted mass once. Animal remains have been found in rocks that geology declares are of igneous origin. Had the rock ever been melted, these remains would have been destroyed long before the rock cooled. Granite is composed of three crystals that are unique, and melt at different temperatures, and are soluble under different circumstances. These crystals are always imbedded into each in the closest union, and yet distinct. This could not have been the case, had they been a melted mass once, for they melt at different temperatures. Granite can not be melted and retain its present structure, different portions run together at different temperatures. Melting granite changes its specific gravity and structure, hence it never has been a melted mass. The specific gravity of granite is exactly that of quartz resulting from aqueous crystallization. Gustave Rosè has manufactured feldspar, an ingredient of granite, by mixing lye and clay at 400°, a very low temperature, and subjecting them to great pressure. Anstead has produced granite out of stratified rock, which, according to geology, is an aqueous rock, and never produced immediately from melted matter; thus showing that they are not radically and structurally different, as geology assumes, and that granite is the product of stratified rock, both of which contradict geology. The present indications are that granitic rock is the result of chemical action at a comparatively low temperature under great pressure.

A pet position of geologists is that granitic rock is the earlier formation, and stratified rock of more recent origin. Anstead's experiment shows that granitic rock is the product of stratified rock, and of the more recent origin. The argument based on the superposition of stratified rock above granitic rock is worthless, for immense masses of granitic rock are found above stratified rock. Another pet theory of geology is, that the center of the earth is a melted mass of superheated matter in a gaseous form. Such is a necessary deduction from the premise, that all the earth was once a mass of nebulous vapor, that has since cooled off and solidified at the surface. We have already called attention to the fact that the sun would have caused tides, and have prevented a crust being formed, and also have prevented crystallization. The enormous expansive pressure of such a mass of superheated gaseous matter is entirely overlooked. An engineer estimates that it would require a thickness of eight hundred miles of the best boiler iron to withstand the pressure of such a mass of superheated vapor. The crust of the earth would have to be so thick that there would be no melted center. A geologist suggested that the volcanoes would relieve the pressure. "So much the worse for geology," retorted the engineer, "for if the volcanoes reach this superheated gas or vapor, it would blow off through them, and leave the earth a hollow shell, as does a perforated boiler." Another scientist makes a calculation, based on the increase of density resulting from pressure, as we pass towards the center, and reaches the conclusion that the center of the earth must be many times more dense and solid than the solidest steel. And thus these sciences that are so definite and certain, and so accordant, and so much more reliable than the Scriptures, agree. Then mud and fish are cast out by volcanoes. The matter that they cast out is not from such a mass as geology places at the center of the earth.

An eminent geologist, to relieve the difficulty, supposes that as particles cooled at the surface, gravity would attract them towards the center, and thus there would be two places where cooled matter would be aggregated, at the surface and at the center; and that there is a solid core at the center of the earth, with a melted mass around this core, and a cooled crust at the surface. In this he contradicts all experience and common sense. We never see a melted mass cool anywhere except at the surface, and from the surface inward, and it remains melted at the center long after it is solid at the surface. Even if particles passed toward the center as they cooled off, the heat toward the center would melt them long before they reached it, and a cooled mass at the center would be melted by the surrounding hot mass. Then we have numerous and various theories of the cause of the elevation of mountain chains. One supposes that they are the result of the heaving of the heated center of the earth. Another supposes that the materials of the center of the earth once were loosely aggregated together, and by the settling of these loose masses intense cold was generated, which heaved up the surface, as we know great cold will. Another supposes that chemical action of water on metalloids generates heat, and causes volcanoes, and throws up mountain chains. And so these speculations go on, and these theorists agree in but one thing, and that is, that believers ought to abandon their faith, and accept their speculations that are as changeable and fleeting as the mists of the morning. The theories of geologists concerning the age and priority of rocks are mere guesses and speculations. So are their speculations concerning the age of animal remains and exuviæ, vegetable debris, debris in caves, debris of lacustrine villages, debris and mounds of ashes, and remains of food, etc., found on shores of seas and rivers, where there were villages in former ages, and alluvial deposits. How does the geologist know how long it took to form a certain stratum, or a succession of strata of rock, or any other deposit—a deposit of a given thickness—to harden a rock, or form an alluvial deposit? How does he know that the remains that he finds in caves, or in alluvial deposits, or even in rock strata, are cotemporary, or succeed each other in the order of superposition? In caves, debris of all ages might be commingled by flood, or the action of man or animals. The same holds true of alluvial deposits, where floods tear away and deposit together debris of several geologic ages. In the case of rocks, earthquakes and catastrophes mingle remains of various ages together.

What is the rule of the geologist in making his calculations based on the thicknesses of deposit and time of hardening? What is the rule or data used by the geologist in determining length of time? It is all guess and hypothesis, and so many contradictions to his hypotheses and failures of them have appeared, that they are worthless in attempting to determine the age of any particular deposit or remains. The blunders of geologists have been so many, that no reliance can be placed in their calculations. Brydone clearly proved, so all geologists claimed, that certain remains of man were covered by deposits of lava at Mt. Ætna, in such a way as to show that they were at least eleven thousand years old. A later investigation proved that they were less than seven hundred years old. French geologists found deposits in Egypt that were at least thirty thousand years old, with relics of man's work among them, and the world rang with the exultations of infidels. The next year Roman coin and pottery were found beneath them. The world has rung with the case of a skeleton found in an alluvial deposit near New Orleans. It was at least fifty thousand years old. No matter how much river men urged that they had seen acres of deposit thirty and forty feet thick, formed in four or five years, and different strata of timber, earth, and animal and vegetable remains all formed in a few years—thus proving the utter unreliability of such data—the skeleton *was at least fifty thousand years old*, and the case is to-day a stock argument in infidel works; although the gunwale of a Mississippi flat-boat has since been found in the same deposit lower down. A skeleton was found in Denise, in France, over which great ado was made, until an English clergyman clearly showed that it was a quarryman, of probably the Roman period, covered by a landslide. Skeletons of a man and woman were found in Guadaloupe, that geologists claimed must be at least one hundred thousand years old. Dana showed that they were skeletons of Caribs, and probably not as old as the discovery of America. A skull was found at Los Angelos, California, by Prof. Whitney, of which much was said, until it leaked out that it was a practical joke or sell, practiced on the geologist by some miners, in revenge for his pronouncing their mine worthless, and ruining its sale. They wanted, they said, to show that his science was all guess work and a humbug, and they did.

Great ado has been made over lacustrine villages of the lakes in Switzerland, and mounds of ashes and food found on the shores of Denmark and other places. They proved the great antiquity of man, and the truth of the speculations of the theory of historic development in regard to the stone age, bronze and iron ages. No attention was paid to the fact that history declared that such cities were there during historic periods, and that they exist now. They were of great age. Finally, remains of Roman utensils have been found among what they claimed to be the oldest remains, and that bubble was exploded. Schliermacher's excavations at Troy, prove that there a stone-using age succeeded an iron and bronze age, and that these various materials were used cotemporaneously. Again and again have alluvium and deposits, in caves and other deposits, been cited as of great antiquity, when living men could prove them to be of recent origin. The writer has known rock formations and tracks of animals to be pronounced of untold age, when many living witnesses could prove that they had been formed within their own knowledge. Had he space he could give scores of such cases. A pet hobby of the geologist of the present day has been, that certain strata are azoic, or without evidence of life, or evidence of life during their formation. But life has been carried back step by step through these formations to the secondary formation, and the geologist now dare not say that any formation is azoic. Another hobby was, that simple forms of life alone appeared at first. This is contradicted by the facts. High orders of fishes appeared very early. Also orders of animals but little inferior to our vertebrata appeared long ago, and without any preceding types. The dying out of certain types, especially the simpler forms, is another hobby. Deep sea dredgings prove that enormous quantities of these types yet exist, just as they did in the earliest geologic ages. Succession of types, of vegetables and animals, was another hobby. But in a forest bed in Cromer, in England, were found, in an alluvial deposit, eleven species of plants now existing, and remains of several species of animals now existing were found commingled, and even beneath the remains of several species of animals that geology declares have long been extinct and existed several geologic ages anterior to this. This utterly disproves the geologic assumption concerning the antiquity of man, because his remains have been found in caves and other places, in connection with such remains. There are several cases like the one at Cromer, which overturn the very fundamental theories of geology. That the earth was, during geologic ages, and for immense periods, very different from what it now is, is another pet theory of geology. The discovery of warm-blooded animals essentially like what we have now, and air-breathing animals essentially like what we have now, and of high orders of plants essentially like what we have now, proves that the earth must have been similar to what it is now throughout these geologic periods, and that some of the earliest must have been essentially in climate and other characteristics as it is now. These facts disprove the chronology and chronologic succession claimed by geology.

Another theory of geology is that chalk must have been formed at an enormously remote period, and during an enormously long period of time. Recent discoveries prove that it is being formed in immense masses now, and very rapidly. If what is forming now, and has been formed during the present generation, were to be elevated along-side of what geology says was formed long ago, it would be compelled to give to them the same age. Such catastrophes as earthquakes, mingling as they do the remains of various geologic ages, changing the order of position and succession, and the remains or strata that are in contact, destroy all possibility of putting absolute reliance on these data. Lyell admitted this when examining the Natchez skull, and discarded it, because the earthquake, 1811, had made such changes in that portion of the Mississippi Valley, and had mingled remains of the year 1811 with earlier deposits, so that no reliance could be placed on remains found as it was. Such are the reasons why we say geology is not a science, and why we claim that at present we must pay no attention to the hypotheses of geology. The facts of geology do not contradict the statements of the Scriptures. Suppose the geologist finds any or all remains, in any or all strata, what statement of the Bible is contradicted thereby. The conflict of the Scriptures is with the speculations of geologists on these deposits. All these speculations are mere guesses, and have been contradicted by the facts of their own field of investigations, so that they are unworthy of notice. The greatest living geologist has said that "Geology is like a man in mid-ocean, in a boat at midnight, without rudder and compass, and without a star visible." Until it finds its own moorings, we can safely afford to let it drift, and not mind the discordant shouts of its bewildered advocates.

CHAPTER VI.

THE THEISTIC SOLUTION.

INVESTIGATION, research, and thought have led every thoughtful mind to the axiom, that all human inquiry finally brings us face to face with ultimate truths, truths that can be resolved into no simple elements, and for which we can give no further reason than that they exist. On these ultimate truths rest all reasoning, demonstration and inference. As we pass out from them in our explorations, we always end in the mysterious, the unknown, the infinite. All around the finite area of the known, lies the infinite unknown. The circumscribed circle of human knowledge has all around it an infinite circumscribing area of the mysterious and unknown. As a person standing in the midst of a boundless plain finds that the unknown that lies beyond his horizon limits his view on all sides, so does man, in all his investigations in every field of thought, find that his explorations end in the unknown, and that inseparably connected with what he claims to know is an infinite border-land of the unknown. As the explorer, who ascends by toilsome effort the rugged steeps of a mountain, whose top is hidden and obscured in the clouds, finds, as he gazes around him, that he has enlarged the circumscribing area of the unseen as rapidly as he has enlarged his horizon, so the toiler up the steeps of human thought, only sees more clearly, as he ascends, how boundless is the mysterious and unknown. This mystery arouses and excites our thought, and at last baffles and limits it. But the mystery is not overpowering. It does not hinder our investigating and learning what is within our horizon. Nor does it forbid our thinking of and apprehending the infinite that lies beyond, though we never can comprehend it. Man can apprehend certain infinite truths concerning the universe, and must do so to properly understand the finite and known. The mystery connected with them does not disprove the accuracy of such apprehensions.

As the rivers that bounded the ancient Eden could be traced to one source, so can all truths of a science be traced back to one general truth; and all sciences can be traced back to one fountain of truth. In building up a science, men have first observed phenomena and their characteristics, and recorded them, and attempted to account for them by speculation and hypothesis. They arrange phenomena on the hypothesis as they string beads on a string. Soon a phenomenon is observed that will not accord with the hypothesis, and it has to be cast to one side, and another hypothesis substituted in its stead, and thus, by many efforts, and by laborious research, and through many failures, man toils onward toward the great underlying principle of the phenomena, the great central truth, around which every phenomenon will crystallize into a system, and that will give order, beauty and harmony to seemingly disconnected, or even discordant phenomena. When this central truth, or underlying principle, is discovered, we have a science, and not till then. This great principle is always an universal truth, expressing the relation of the parts of the system to each other, or of the parts to the whole system, or of the system to other systems, or all of these relations. All sciences are systems of phenomena and truths, classified by fundamental, ideal conceptions, or great ideas of reason, expressing the relation of the parts of the system to each other, or of the parts to the whole system, or of the system to other systems, or all of these relations. This tendency of the mind to classify the phenomena of the universe by means of ideal conceptions, and to search for the idea of reason that will classify them, is not, as physicists claim, an infirmity of thought, but one of the grandest and highest efforts of reason, to ascertain the fundamental idea of reason realized in the phenomena, and which expresses this fundamental principle and reason. Without this controlling catholic tendency of the mind, man would never attempt to investigate phenomena, would attempt the construction of no science: and the proper investigation of phenomena, and the construction of science, would be utterly impossible. So would all rational investigation of phenomena, and all construction of science be an impossibility, if there be no great ideas of reason, realized in the universe, and pervading the universe, as controlling and regulative principles. Newton, Harvey and Copernicus have been immortalized for the discovery of such great truths in different departments of thought.

As we pass from our solar system, with the sun for its center, to other similar systems, we apprehend that these have a relation to each other, and to a vast central orb, and, perhaps, this vast system is related to others equally vast, until we are lost in the immensity of the infinite. As it has been with each science, so it is with the circle of sciences in their relation to each other. Men have been trying to discover the great central science, the great underlying principle of all science, the great truth that is related to all truth, and which, as Byron says of virtue: "Stands like the sun, and all which roll around drink life and light and glory from her aspect." It is the glory of modern science that it has conceived the idea that all the seemingly antagonistic displays of physical force, observed in the phenomena of nature, can be resolved into one, exhibited under various modifications. Displays of force, that were once regarded as manifestations of entirely distinct, and even antagonistic, forces, are now conceived to be but different manifestations of the one force, and they can be resolved into each other. So it has been conceived that all sciences are but different evolutions of one great central principle or truth. As we pass from planet to planet and to the central sun, so we can pass from truth to truth and to the central truth in each science. And as men have passed from system to system, to a vast central orb, so has human thought tried to reach the central idea of all science. The conception is a sublime one, and an evidence of the divine image stamped on the human intellect, that has thus tried to think the thoughts of infinite reason. Two answers to this problem of problems are now striving for ascendancy in the great field of research and thought. The devotee of physical science would lead us up to matter and force, blind, insensate matter and blind, irrational force, as the ultimate of all research, the αρχή of all being. Religion and its cognate departments of thought would lead us up to Infinite Mind, Infinite Spirit as the cause of all things, the beginning, source and origin of all being.

The question then is, "Shall theology, in the broadest and truest sense of that noble word, or shall physical science, be the science of sciences, the central science, the fountain from whence all truth and science flows?" Questions concerning the nature and origin of life, the ground and origin of being, the nature and origin of force, the problem of substance, of being, of cause, of the absolute, the infinite, the uncaused, the unconditioned, are each and all but different ways of presenting this problem of problems: "What is the ultimate principle, the ground, the αρχή, of all being?" In their answers to this question men may be divided into:

I. Antitheists.—Those who deny the existence of an intelligent, absolute, first cause, asserting either: 1st. That the present order of things is eternal. 2d. Or that all is merely a fortuitous concourse of atoms and phenomena, or the result of such concourse. 3d. That, although all is in accordance with order and law now, originally all was the result of a fortuitous concourse of atoms or phenomena. 4th. All is controlled by blind, resistless fate, or relentless necessity. 5th. Or that the universe is the result of an indefinite course of atheistic development, in accordance with certain self-existent and eternal principles inherent and eternal, in self-existent and eternal matter and force.

II. Atheists.—Those who merely have no god, denying that man knows or can know any thing of the absolute cause. These might be called *theoretic atheists*. Then there are *practical atheists*, or those who merely ignore the existence of God in their lives and their thoughts, those who attempt to account for all that exists without recognizing his existence or exercise of power, those who divorce God from all connection with the universe, those who nominally recognize his existence or creative action, and yet divorce him from all connection with what they pretend to regard as his works. Any system that denies or ignores God's immediate and personal action and energy, in creation, government and providence, is atheistic. Much of modern science and thought is atheistic in tendency and result. It leads the mind up to the tremendous forces of nature, up to matter and force, and leaves it face to face with them, and never leads from nature up to nature's God.

III. PANTHEISTS.—Those who regard God as an irrational principle or a combination of irrational principles pervading the universe. Those who regard God as the World Soul bound up in, and subject to, the eternal and necessary laws of the universe, attaining his highest and only intelligent manifestation in man. Such a system is really atheistic. Much of modern poetry and speculation is pantheistic.

IV. THEISTS.—Or those who believe in an intelligent, absolute, first cause of all that exists, who created, sustains and governs all things, and is self-existent, uncaused, unconditioned and absolute. Such are the four great classes into which men may be divided. We might divide them into but two—*atheists* and *theists*. Atheists make matter and force the ground and beginning of all being, without the creating, originating and directive control of intelligence. Theists make intelligence, mind, reason, the source of all being. Pantheists are really atheists, for their World Soul is bound up in and subject to matter, and really nothing more than the force of the atheist, and intelligence is evolved out of matter and force, and by matter and force, as much in that system as in atheism. Such is the problem, and such are some of the answers human thought has given to it.

Perhaps, before we enter on the direct discussion of the question, a good preparation for it would be to clear away certain rubbish in our way, by inquiring how man came by the idea of God, or an intelligent first cause. Error here will often pervert or weaken an entire line of argument. Some claim that without revelation men would never have had any idea of God or of his attributes. Such was the position of the late Alexander Campbell. He based his position on the sensational, materialistic philosophy of Locke. He claimed that man has, and can have, no knowledge or idea, except such as comes through one of the five senses. As neither God nor any of his attributes are objects of sense, man can obtain such ideas only through direct revelation. Such a position, while attempting to elevate revelation, is really one of those suicidal arguments that destroy the cause they are expected to sustain. It concedes that religion and the idea of God are foreign to reason and human nature, and that reason can not sustain them. It assumes that man has no religious nature; for if he has, it certainly will have its outcroppings in religious ideas. It makes revelation create or implant within man his religious and moral nature. It destroys the immortality of the spirit and all proof of God and immortality. It is opposed to a correct mental philosophy. It destroys all human responsibility and accountability. It contradicts the Scriptures. If the reader will read the nineteenth Psalm, and the first and second chapters of Romans, especially the twentieth verse of the first chapter, he will see that this position is clearly contradicted by David and Paul.

Some claim that man can, by his own unaided efforts, attain to as complete an idea of God as his reason can grasp. But as the child can be taught what he can not attain by his unaided efforts, so can the mightiest intellect that the world has ever known receive and grasp ideas above its capacity to discover,if imparted to it by a higher intelligence. As man learns by comparison, induction and deduction, and as he is imperfect and impure himself, he can not attain to a correct idea of God's moral attributes by his own unaided efforts; for he can not evolve the idea of absolute holiness out of his own nature, or that of his fellow-men. If he could attain to such a conception, he can not determine in what it consists. Man has never emancipated himself from idolatry, except by and through revelation. His intuitions, his aspirations and his history prove his need of revelation. The true position is that man is constitutionally a religious and a worshiping being, and has a religious element in his nature. This religious nature will have its expression in his life, and man ever has an idea of a God and of his natural attributes, but such an idea would be imperfect. This would be especially the case with the moral attributes of God. As these are the very attributes of God that man must know, for on a knowledge of these depends his elevation by worship and religion, God must reveal his real character in full for man's adoration and imitation. As to how the idea of God originated in the human mind, different opinions have also been entertained. Some contend that it is innate or connate, meaning that man is born with it. The notion that man has any such ideas is now abandoned. Some contend that it is an immediate or underived intuition. It is not; for men do not appeal to it as such, but regard it as susceptible of proof, whereas all immediate underived intuitions are not susceptible of proof, they are self-evident. We simply know them to be true, and that they can not be otherwise than as they are, and true. Some regard it as a tradition from primitive revelation. It is, doubtless, in many cases, but can not be so in all cases; for men have the idea who have no such traditions. Again, it is only such ideas as man would have had anyhow that have been thus preserved, or can be thus preserved, through all the vicissitudes through which such an idea would have to pass. Then such an assumption is assuming the very question at issue. The proof must be adduced that all men have obtained the idea from revelation, and this, the very point at issue, must not be assumed.

Some attempt to answer the question by saying man always has had the idea. Still the question arises, how did the first man obtain the idea? I believe that he obtained it by revelation, or was not left to reach it by the action of his mind. But that all men that have since lived have received the idea by tradition from this revelation, is a point to be proved and not assumed. The atheist says by imagination. Men obtain simple uncompounded basis ideas only by consciousness, sensation, intuition and revelation. Imagination can not originate a simple uncompounded basis or primitive idea. The idea of the being or existence of God, is a simple uncompounded primitive or basis idea, just as the idea of the existence of human spirit is such an idea. The idea of each of the attributes of God, is a simple uncompounded primitive or basis idea, just as the idea of each attribute of the human spirit is such an idea. Imagination can not originate either of them. It may play fantastic tricks in its combinations of the attributes of God, but the simple idea of his existence, or the simple idea of each of his attributes, imagination can not originate. They must come through one of these four sources: consciousness, sensation, intuition or revelation. Imagination can only combine what it receives through these sources; hence the simple idea of the existence of God, or of each of his attributes, must have come through one of these sources. The true position is, that the idea of God is a catholic affirmation of universal reason based on phenomena furnished by sensation and the characteristics of the phenomena, and also on intuitions of reason concerning the phenomena and their characteristics; or on data furnished by the senses, and intuitions of reason concerning these data. If we use the term intuition to cover all these catholic or universal ideas that man every-where and of necessity reaches by a proper exercise of his reason, it is such an intuition; but it is not an immediate or direct intuition, for it is not self-evident. It is a universal or catholic intuition of all reason; for man every-where has it and can not divest himself of it. Man is constitutionally a worshiping being, and can not divest himself of this inherent tendency. Even the atheist will, in spite of himself, show the presence of this tendency and intuition. Comte's deification of reason, and French atheistic systems of worship, and the tendency of atheists to run into Spiritism, of which the Owens and Prof. Hare are notable examples, seen also in a multitude of other cases, show that this intuition or impulse can not be eradicated.

With these preliminary remarks, we propose, as a solution of the problem of being, the following thesis: There is an Infinite Eternal Self-existent Intelligent First Cause of all that exists, an Intelligent Absolute Cause, or a God who created and who governs and sustains all things, and who is infinite in his perfections and attributes. No question can be so important as whether this be true, for it is the fundamental question in all knowledge and truth. Is blind, irrational matter and force the ground of all being, or is mind? If we establish the first position, there can be no divine government, no accountability, no responsibility to such government, no reward or punishment, no revelation, no providence, no prayer, no atonement, no pardon of sin, no worship, no religion, no right, no wrong, no moral desert, no responsibility, no morality; for these things can not be evolved out of mere matter and force. If we establish our thesis, these things are a possibility, a probability, a reality, a necessity. If we establish the first, we have no law or government, except matter, force and necessity. If we establish the second, we have a government of reason and intelligence. Then the entire question of law, government, morality, responsibility, duty, right and wrong, hinges on this question. Our ideas of the dignity and value of human nature, its origin, its relative value and importance, its destiny, our aspirations, and our conceptions of the basis of law, government, duty, and right and wrong and morality, are determined by our views concerning this question. So also are our ideas of prayer, providence, worship and religion.

In our investigation, we shall be guided at every step by the great principle of inductive philosophy: "Examine carefully and fully the existences and phenomena in question, and from their characteristics determine their cause." The common sense of all mankind has ever recognized two spheres of existence and phenomena—the material or physical, and the spiritual or mental. Before we reject either, or make it merely a different manifestation of the other, or subject it to the same laws and rules of investigation and interpretation as the other, we must, by a careful investigation of the two supposed spheres, and a careful induction of phenomena and their characteristics, prove that we are justified in doing so.

We can not assume the physical sphere to be the only one, for mind has to investigate it, and determine its existences and phenomena, and their characteristics. Human reason is the agent or actor in all investigation, and its catholic intuitions must be our standard. We can not use human reason as our agent to do a certain work, that we have in our prejudices decided to be all that it should do, and cast to one side its catholic intuitions, or use it as a means in its own destruction. Not only so, but in our investigation of nature, we must take all nature into our field of investigation. Man's nature, the highest element in nature, and his moral and religious nature, the noblest element in his nature, and the catholic intuitions of his moral and religious nature, the regnant and regulative principles of his nature, must not be overlooked, ignored, or denied. The physicist begins with the lowest part of nature, and as he meets with the higher, he interprets it by the lower, and drags it down and merges it into the lower. He does not recognize the differences and higher characteristics as he meets them, but he ignores them or explains them away, and thus reduces all nature to a level with the lowest part of nature. The true course is to begin with the higher, and make it our means of investigation and comparison, and our standard and measure. As we find in our passage downward, that a higher characteristic disappears, let us recognize such facts, and keep these differentiæ between the higher and lower ever in view. We must, then, take all the phenomena of nature into our field of investigation, and especially its highest and noblest element, man's mental, moral, and religous nature. Reason is the agent in the investigation, and its catholic intuitions our standard. We must have an accurate conception of reason and its catholic intuitions, its fundamental ideas and regulative truths and principles. If these are rejected, all reasoning is at an end, and all attempts at reasoning a folly and a mad farce. Instead of groping in the mire and clay of matter and force with the muck-rake of observation, uncontrolled and unilluminated by the pure light of the great ideas of reason, let us rise to what the physicist acknowledges to be the highest product of evolution, and the noblest expression of the law of evolution, man's rational nature, and examine the image of God in our own nature, the human spirit, and let in on the phenomena of nature the full light of reason. Let us clear the microcosm, man's spirit, of all obscurities that a blind materialism has heaped upon it, lift it out of the muck of matter into which he has dragged it, and then we can rise to an apprehension of the Macrocosm, the Infinite Creator. How can a man have any conception of the universe, who views it only through matter, and rejects all the light of the light of the world, mind? If we extinguish this light within us, how great is the darkness! Such, then, shall be our field of observation, and such our agent and means of observation and investigation, and such our standard of authority.

The lines of argument that have been pursued in demonstrating the existence of God are manifold, and often sadly confused. Perhaps we can not better begin our work than by arranging and classifying them:

I. Ontological.—This attempts to prove the objective reality of the existence of God, by the subjective notions of the human reason. It assumes the validity and reliability of our reason, and that every intuitive, subjective notion of reason has its counterpart in objective reality. It is presented in several forms: 1. It is assumed that the idea of God is so fixed in the human mind, that it can not be eradicated; and as our nature is veracious and not a cheat, the objective reality must exist as the counterpart to the subjective notion. Anselmus' proof from the most perfect being comes under this head. God is a being than whom we conceive of none greater or more perfect. But real existence is greater than mere thought, for the cause must be greater than its effect, hence the existence of God is guaranteed by our conception, or the contradiction of a being more perfect than the most perfect being would emerge. Descartes gives another elaboration of the same thought. Necessary existence is essential to the idea of all-perfect being. We have the idea of all-perfect being. Hence the all-perfect being must exist. He further says that the less perfect can not evolve the most perfect, for an effect can not be greater than its cause. We have the idea of an all-perfect being, hence he must exist to give rise to the idea, as the substance must necessarily exist to give rise to the shadow. 2. Space and time are the necessary attributes of substance, and mind is assumed as the necessary substance in which they inhere.

II. COSMOLOGICAL.—God's existence is established by the principle of causality: 1. The necessary is the essential antithesis of the contingent. In the necessary alone do we find sufficient ground for the existence of the contingent, for the contingent is not self-existent nor of itself self-sustaining. 2. Something now exists, therefore something must have always existed, for "*Ex nihilo nihil fit*"—out of nothing, comes nothing. 3. We exist. We did not cause ourselves. Some adequate cause for our existence must exist. To make this a valid theistic argument, it must be established that mind or intelligence is the necessary antithesis of the existing contingent, or that the something that must have always existed, must be an intelligence, or that the cause of what now exists must have been an intelligence. This can be done only by the next line of argument.

III. TELEOLOGICAL.—This passes from ends accomplished in creation back to an intelligent cause: 1. We start from man's work caused, as we know, by intelligence, and pass back through nature to an intelligent cause. Or we start from nature's works and pass down to man's works, and finding the same characteristics pervading them, as we know man's work had an intelligent cause, we throw nature's works back on an intelligent cause. 2. We find law and order in the phenomena and types of the existences of the universe—a law and order pervading the whole universe, and including every phenomenon and existence in it—we find co-ordination, adjustment, and adaptation of existences to each other, and of means to ends in nature, which have their necessary ground in mind. 3. Animals, such as the bee, act in accordance with the most profound rational ideas. Such an act must have its ground in reason. It is not in the bee. It must be back of the bee, in its Creator, who has given to it an instinct, impelling it to obey this law. 4. The most profound scientific truths and laws are wrought out in the organization of animals, such as the electric eel, the poison of certain animals, etc. These results have their necessary ground in mind. 5. The highest and most abstract conceptions of reason are realized in nature, and nature can be construed only in accordance with them, and by them. Nature must have been constructed by reason, and reason must have realized these ideas in constructing nature.

IV. Ethical.—This proves the existence of God as a moral lawgiver, ruler, judge, and executive in two ways: 1. Conscience gives us ideas of good and evil, sin and righteousness, moral desert, and rewards and punishments. All these have their necessary ground in mind, as lawgiver, ruler, judge, and executive. 2. The disorder of the moral universe. This throws us forward into another state of existence, when this confusion will be righted by a Judge and Executive.

V. Intuitional.—1. Man has intuitions of the infinite, infinite space, infinite duration, infinite power, infinite cause, infinite intelligence, infinite intelligent being, infinite intelligent absolute cause. 2. Man has an intuition of his dependence, of his need of an independent existence on which to rest. 3. In the poet and all spiritual-minded persons, there are intuitions of an Infinite World Soul, or an Intelligent Absolute Cause. 4. The intuition of worship. Man is a worshiping being. This can be caused only by an intuition of an object of worship. Human reason has ever affirmed that there is a God. All geography and history of all ages, and all ethnology, demonstrate this. Man has ever searched after, and claimed revelation from God. All these facts demonstrate that the existence of God is an intuition of human reason. The testimony of tradition, history, archæology, philology, and revelation are all valuable as corroborative proof.

We regard the intuitional as the basis of all other arguments, and as the fundamental and most valuable proof. It must furnish the basis of all our reasonings. The other lines of argument can be established and made valid only by the intuitional method, by an appeal to its intuitions, and resting *them on them.* They are chiefly valuable as furnishing collateral proof, and illustrating the intuitional method. We can find a basis for them, and repair defects in them, and give them validity only by an appeal to the intuitional method. Justice, however, to the teleological method demands that we say that it furnishes to the intuitional method the occasion to evolve its intuitions, especially its intuitions of intelligence, in the phenomena, and in the cause of the phenomena. The intuitional method rests on the teleological for all its intuitions of intelligence in the first cause. As we have taken as our standard the catholic ideas of human reason, we will have to define, elaborate and defend these somewhat carefully and fully. As preliminary to, and as a foundation for our line of argument, we lay down the following truths. No system can be based on sensation alone, or on the contents of sensation entirely. The mind has intuitions above and beyond the contents of sensation, on which it builds all systems, by which it constructs them, and by which it regulates its reasonings, and tests them. Nor can a system be built entirely on revelation, for man learns by comparison and deduction, and there must be in the mind a basis for comparison, on which revelation is based, and to which it appeals. Nor on imagination alone, for that is a constructive faculty, which merely uses the materials it obtains from other sources. Nor on sensation and demonstration combined, for demonstration builds on and by means of regulative principles and truths, and sensation reveals only phenomena and not regulative truths.

There are in the mind at birth certain constitutional powers or faculties which develop with the growth of the mind, in accordance with certain innate inherent laws of the mind. When the senses appealing to the mind, and exciting it to action, and placing before it existences and phenomena, furnish the occasion, the mind, in accordance with the constitutional laws of the mind, and the necessary nature of its thinking, has conceptions above and beyond the contents of sensation. These are known as axioms, self-evident truths or intuitions. They are fundamental or basis ideas. They are the basis on which all reasoning and demonstration and also revelation must rest, and to which they must appeal. Without them, sensation would produce no more reasoning in man than in brutes, for they have all the exercise of the senses that he has, and even more acutely often. Nor would revelation produce any more effect on him than on the brutes. Sensation and these intuitions furnish the materials used by the constructive faculty—the imagination. The contents of sensation furnish to the mind the occasion to evolve these ideas, but the contents of sensation are not the ideas. We see the parts, we see the whole, but we do not see that the sum of the parts is equal to the whole. We see two straight lines, and we see the space between them, but we do not see that two straight lines can not enclose a space. These truths are affirmations of reason, above and beyond what is held in sensation. Sensation furnishes to the mind the occasion to evolve the ideas, but it does not furnish the ideas.

Fundamental or basis ideas are:

I. Truths revealed in consciousness. I am conscious that I exist, and of the exercise of my faculties. No one of the senses gives me this knowledge.

II. Phenomena revealed in sensation.

III. Intuitions of reason.

IV. Revealed truths.

On these rest demonstrative truths or ideas, analogical truths or ideas, and inferential truths or ideas. As this is the fundamental work of our demonstration, we will elaborate more fully in another form. There is innate power or capacity, or there are inherent constitutional faculties of the mind. These faculties have regulative laws, inherent properties, and regulative principles. The mind has, by means of these constitutional faculties and inherent regulative principles, certain original conceptions, fundamental ideas or intuitions. In consequence of these constitutional faculties and inherent regulative principles, the mind must discover eternal truth, necessary truths, such as two straight lines can not enclose a space, every effect must have a cause. Indeed, we can accumulate the data of experience only by means of these constitutional faculties, regulative principles and intuitions. If it were not for these, phenomena would chase each other across the field of sensation, as images appear and disappear in a mirror. All reasoning is based on original convictions, and all original convictions are intuitions. Objects, through sensation, furnish the occasion to the mind, and excite it to action, revealing to it phenomena and their characteristics, and then the mind has original convictions, above and beyond what is held in sensation. We have the contents of sensation, then original, individual convictions, and then universal maxims. Sometimes the latter are the result of one observation, and sometimes the result of a number of observations. As the mind apprehends a truth expressing a relation of the parts to each other, or to the whole system, or of the system to other systems, it recognizes a regulative truth, and accepts it as such, whether it be an induction from one observation or from several observations. All intuitions from one observation are immediate spontaneous intuitions. Those from a number of observations are generalized convictions or catholic ideas.

The tests of intuitions are: They are self-evident—they are necessarily true, or can not be otherwise than as they are, and true—they are catholic ideas, or all men have them from a proper exercise of their reason—they express a relation of the parts of a system to each other, or to the whole system, or of the system to other systems. The term intuition, in our reasonings, is used to represent:

I. Constitutional, universal, regulative tendencies of the mind.

II. Original convictions in consciousness, arising from immediate perception of objects, and they are original and necessary, in consequence of the nature of things and the inherent tendencies of the mind.

III. Catholic ideas, or truths coming from observation and generalization, that are fundamental in their nature, and express fundamental truths.

In appealing to ideas as intuitions, we have to decide: 1. Are they intuitions—are they self-evident—are they necessary—are they universal—do they express a relation? 2. Are they correctly expressed? 3. What is a proper use of them, a legitimate application of them? If the first two questions are answered in the affirmative, we must implicitly accept and follow them, or all reasoning is at an end. To reason at all, we must accept and act on the veracity and validity of our reason, in its intuitions, and accept these intuitions as the foundation of all reasoning, the guide in all reasoning, and the standard by which all reasoning must be tested. This is true of all men, atheist and theist alike. If our reason, in its intuitions, be untrue or unreliable, there can be no foundation for reasoning, no guide in reasoning, no test of reasoning, and all reasoning is an utter impossibility. One might as well attempt to erect a temple on the mirage of the desert, as to reason under such circumstances. We repudiate the materialism which denies all intuitions of reason, and the idealism which denies the objective reality of every thing exterior to the mind.

Some of the fundamental primordial intuitions of reason, which can not be questioned, and back of which we can not go, are the following: There is a Me, and there is a Not-Me. There is a perceiving Self, and there is a Perceived-by-Self. These are distinct and different, and can not be confounded in our thinking, or the reality of either questioned in our reasoning. There is body or matter, and there is mind or spirit. Body or matter has objective and independent being—that is, it is not dependent on observation for existence—and it has external and extended reality; and there is in body or matter potency affecting mind or self, and causing it to be perceived by mind or self. We cognize or intuit in body or matter these essential properties: Extension, size, situation, figure, density, rarity, impenetrability, mobility and inertia. We cognize or intuit the existence of force, affecting matter, and force in bodies, affecting other bodies. We cognize or intuit by consciousness an existing, independent, abiding, potential self, as different from matter in which it resides or our bodies, and as distinct from the organs which it uses, and which reveal matter and our bodies and themselves to self. We intuitively know and feel that the knowing mind is different and distinct from our bodies known by it, and in which it resides, and which it uses, or matter known by it, or the organs or functions of our bodies which it uses, and which reveal matter and our bodies and themselves to the knowing mind. We intuitively know that mind has faculties or the characteristics of consciousness, volition, emotion, thought and reason, or moral, rational, thinking, responsible personal attributes. We intuitively know that matter has not these attributes, but that it has other and different characteristics, which reveal it to spirit, which alone has these attributes. We assign personality to mind, but never to matter. We intuitively know that force belongs to matter or body, and faculty to mind. We intuitively know, also, that the force which we see in matter—the force that we control and use by our minds—the force that we cognize in our bodies, acting independent of our minds, or in opposition to our minds, or in obedience to them, is not our mind or the same force as our mind. We intuitively recognize a difference between physical force, seen in insensate matter, and vital force, sensation, and rational or mental force or power. We can not resolve mind into matter, or matter into mind, or mind into physical force modified by organization of matter, no matter what our theories may be. We intuitively make these distinctions, even while denying them and attempting to disprove them. Had we space we could give hundreds of such instances from the writings of materialists.

We intuitively know inertia to be a law or property of matter. The law of motion proves this. Matter can not change its state. If in rest, it would never move itself. If in motion, it would never stop itself. Spontaneity belongs to mind alone, and inertia to matter. Spontaneity is an inherent property of mind that we recognize in all its acts. Spontaneity has no connection with matter. We also intuitively make a distinction between agent and patient, or between what possesses spontaneity or what acts, and what is inert, or is acted upon. We intuitively make mind alone active or the agent. When we have a clear conception of matter, we know that it is not active, but passive. It is never primarily an agent or actor, but the recipient or acted upon, or used as the instrument of the agent or actor. I know this is most strenuously denied by materialists, but no one can accept the fundamental law of motion, that matter can not set itself in motion, and when in motion can not stop itself, and deny the position, that matter is inert and destitute of all spontaneity, and not agent or actor. Mind and matter, then, are different in every particular. Inductive philosophy, then, does not establish the identity of mind and matter, or that mind is a function of matter, for matter never produced mind, has none of its attributes, and never produced one of its phenomena. The properties we ascribe to matter, and the phenomena we assign to it, and the attributes we ascribe to mind, and the acts we ascribe to it, are totally different, and have not one feature in common. The materialist himself would, except in defending his philosophy, scout the idea of ascribing what we ascribe to one of these, to the other. We can not resolve mind into matter, or matter into mind, or confound them in our thinking, no matter what our theories may be. We intuitively and necessarily make these distinctions, even while denying them and attempting to disprove them. This can be proved by taking the argument of any materialist attempting to disprove these assertions.

The great effort of materialism, at the present time, is to eliminate the idea of spirit and God out of the universe, by means of the new doctrine of correlation or equivalence of forces. All forces, as they are called, are but different manifestations of one force, pervading the universe, and they can be resolved into each other, and pass into each other. Some extend this equivalence only to physical forces, and except life, sensation, instinct, reason, mind and spirit from this correlation. But most materialists include all force—vital, sentient, mental, moral and spiritual. I have even read an expression, in which a popular materialistic declaimer expressed his admiration of the wonderful chemistry which changes a cabbage into a divine tragedy of Hamlet. Could madness go further? But we deny that this correlation of physical forces includes, or can be made to include, vital, mental and spiritual forces. In our intuitions we recognize a difference between force, as displayed in inorganic matter, and force as displayed in organic matter. We recognize spontaneity in sentient, rational force, and none in force destitute of sensation and reason or mind. The materialist can evade this only by denying all spontaneity in mind or mental force, or in any force or person or thing. Yet he acts spontaneously in his arguments, his choice of them, and the words he uses, and he recognizes spontaneity in those he addresses, or he would not attempt the argument. He attempts nothing of the kind on a tree, or even on an animal, but he does on man, recognizing spontaneity, alternativity, volition, responsibility, and moral action in himself and others, even while attempting to disprove them. No principle of inductive philosophy has ever declared that physical force and mental force are equivalent, or can be resolved into each other. On the contrary, it declares that neither matter, nor any collection of matter, can, by chemical action or any other means, change physical force into vital or mental force. Nature declares that they are different in every characteristic. In its theories of molecular action of the brain—brain secretion of thought, chemical action, vibration of medullary particles, etc., materialism overlooks the fact that in spontaneous thought and mental action, there must be a spontaneous self-acting, intelligent cause, distinct from all these processes, to originate the processes, and that there must be an intelligent principle, distinct and separate from them, to take cognizance of them. He confounds the agent with his acts, the agent with his tools. He overlooks the fact that there is a spontaneous, self-acting principle or agent, that, by means of memory, imagination and thought, can arouse all these processes independent of any exterior or known material cause, or any action of physical forces. Just as causes, *ab extra*, rouse these processes, and are real substantive agents, so there is a spontaneous, self-acting, substantive agent, *ab intra*. As the former is a real substantive agent, distinct from sense and brain that it impresses, so must the latter be a real substantive agent, separate and distinct from brain and senses that it uses. Materialism overlooks these fundamental distinctions.

This doctrine of correlation of forces violates every principle of inductive philosophy. Its advocates very properly take the phenomena of matter, destitute of life, and the phenomena of physical forces, and reason from them to their causes, but they refuse to take the unique phenomena of life, sensation, and reason, dissimilar and distinct in every particular, and to reason from their peculiar characteristics to their peculiar cause. It either assumes the similarity of the phenomena and their characteristics, in violation of every sense and all reason; or, in violation of all correct reasoning, it applies results reached in physical phenomena to radically dissimilar phenomena. It is a violation of all sense to affirm that the force that burns in the blaze is the same as that which produced a Paradise Lost. The argument adduced to sustain the position does not do so. Are these forces the same and resolvable into each other, or do they merely neutralize each other in their influence on matter? or does one unfit matter to be used by the other? Excessive physical toil unfits one for mental effort, and excessive mental effort unfits one for labor. Are they therefore equivalents, or does one merely exhaust the physical organism, and render it unfit to be used by the other? They are not equivalent, for moderate mental effort is aided by moderate labor, and one enjoys moderate labor after moderate mental effort. Excessive mental effort unfits one for the exercise of the sexual passion, and excessive exercise of the sexual passion unfits one for mental effort. Are they, therefore, but different manifestations of the one force? Who will utter so gross a thought? Does not each merely exhaust the physical organism, and unfit it to be used by the other. Then the mind is intensely active in each case. So there is no resolution of mere physical force into mind, or mind into mere physical force, or any approximation to it. There is an attempt to cover up, under a play of words or a phrase, things radically dissimilar, and to substitute or use a new phrase as an explanation. Has all this talk of correlation and equivalence of forces a syllable of explanation in it of what uses the physical organism, and directs the displays of force in each case? Correlation of forces and forces are modes of motion. Heat is a mode of motion. Motion of what? Modes of motion of what?

What have we but a phrase to evade the issue, and hide the difficulty, and blind the eye of reason, and cheat the judgment, while the idea of mind and spirit is stolen away.

Sensation may be traced to certain nerves, and mental action to the brain; and it may be shown that the mind, while in the body, is always manifested through the brain, and that certain mental processes can be traced to certain portions of the brain, but that is no explanation of thought. It does not tell us what it is that thought, or what thought is, or what mind is. It merely reveals the tools, and not the workman. Suppose the brain secretes thought as the liver secretes bile, what uses the brain in such process, and what takes cognizance of such act? Then this new phrase, "correlation of forces," does not drag mind down to a level with the force that rustles the leaf. It does not bind infinite mind in its chain of modes of blind forces. It violates every principle of inductive philosophy, and every principle of common sense, when it attempts such a monstrous absurdity. Then we repudiate, as a very travesty of all reasoning, the debasing rhapsody that talks of the wonderful chemistry that changes a cabbage into a divine tragedy of Hamlet.

Among other primitive beliefs are space, infinite space; duration, infinite duration, or eternity; existence or being, infinite existence or being. The materialist will accept all these. He will accept the infinite in space and time, and the absolute and unconditioned in being, in matter and force; for he says they are self-existent, eternal, independent and self-sustaining. We affirm on the same ground, as necessary primitive beliefs, mind, infinite mind, good and evil, right and wrong, moral desert, retribution, divine government, responsibility, accountability, and retribution here and hereafter, and a future existence. Mathematical axioms and postulates are necessary beliefs, and so are the fundamental ideas of all departments of science. All science and knowledge is built on them—builded up by means of their regulative guidance and control, and tested by them. The most important primary belief in all reasoning, in every department of thought, and one that lies at the basis of all reasoning, and that regulates and controls all reasoning, is the intuition of causation—that certain things are causes, and others are effects. All men, from the lowest intellect up to the wisest sage, from the lowest savage to the most cultivated intellect on earth, recognize that certain things are causes, and that others are effects. The intuition of cause and effect is more than a recognition of invariable association and succession, or a generalization of our experiences of such association and succession. We recognize no relation of cause and effect in the invariable association and succession of day and night. We do not think of saying that one causes the other. We recognize causation in the conjunction of moon and tide. Certain things may be associated for ever, and an infinite number of times, and we would never think of there being between them the relations of cause and effect. Mill asks why it is that such is the case. Why, in some instances, do we have intuitions from one observation, and, in others, an infinite number will not give any such idea or assurance to the mind? Or if the mind chance to be deluded into such belief, it may the next moment find it is mistaken. The answer, we think, has been given by Dr. Bledsoe. In the latter case the mind observes but the accidents or properties of individual existences, and it either knows that no generalized conclusion can be based on things so changeable and fleeting, or, if it does make such a generalization, it learns its mistake. In the other case we observe a necessary relation between the parts and the whole, or the parts of the system, or between the system and other systems. We know we have a general truth, a universal idea, a regulative principle, inherent in the nature of things, and that it can not change. In the intuition of causation, we cognize a necessary relation between the powers of what we call the cause and that which we call an effect, that brings the latter out of non-being into being. We cognize a potency in the properties of the cause, that is a power bringing the effect out of non-being into being. In the case of mere invariable association, we see no such relation between the properties or powers of one and the other, or operating in the properties of one that would bring the other out of non-being into being. In every case when we recognize cause and effect, we see such relation, such connection. We do not place a middle between cause and effect, and we need none. We intuit an immediate relation or connection, a potency in the cause that brings the effect from non-being into being. This intuition is not a generalization of experience, for we have the idea often, from a single observation, and the infant has it as one of his first intuitions, long before it can generalize.

We have the idea of cause from our consciousness of an energizing will, which is power in action, controlling second causes, our faculties and organs, producing effects, the entire variety of our conduct and acts internal and external. Then the intuition of causation arises in our consciousness as a primitive belief, that can no more be eradicated than the consciousness that reveals it. The infant, as almost the first act of reason, recognizes causation in himself, and that he produces certain effects. He sees other effects and he attributes them to causes; and so clearly does his idea of causation come from his consciousness of his own will, that he attributes volition and personality to all causes, and makes intelligences of every thing, and is angered or pleased with every thing as a person.

Experience enlarges, corrects and confirms this intuition, but does not give it by means of generalization. All reasoning, all science, and all progress are based on this intuition. Men who deny it, rely on and use it in their reasoning to disprove it, for they use and rely on their reasoning as a cause to produce an effect, a change in the convictions of their hearers. If they say they merely bring forth the antecedent of such a consequent, then they affirm that they are the cause that brings forth the antecedent, and they would not do so, unless they intuited a potency in the antecedent to bring into being the effect. Mill attempts to evade the issue by saying that the idea of causation is of such a character, that by generalized experience, when we see one of them, the antecedent, we always expect the other, the consequent, to appear; or when we see the consequent, we always believe that the antecedent has preceded it. In the first place, we would never have such an expectation, unless we cognize a relation between the properties of the antecedent and the consequent, that gives to the antecedent a potency to bring the consequent from non-being into being. Again, it is not a generalization, for we have it before we can generalize; and we have it, from one observation, often. And we may see things associated together forever, and not have any idea of such connection between them, and if one failed to appear in connection with the other, we would never think of a failure of the law of cause and effect. Any reasoning that does not recognize this relation between the properties of the cause as a potency, and the effect as a product, by means of which the former brings the latter out of non-being into being, is totally fallacious, and all reasoning not based on such idea is false. The animal sees only time-succession, and he never reasons or progresses. Man recognizes causation, he reasons and progresses, by using causes to produce desired effects.

The reasoning of Hume was defective, and did not, as his admirers claim, prove that our ideas of cause and effect are merely a generalized conclusion based on invariable succession and association in our minds, so that when we see the one we always expect the other, and this generalized conclusion was the result of accumulated experiences. We repeat, we might see certain things associated forever, and an infinite number of times, and never think of connecting them as cause and effect. Again, in other cases a single observation is sufficient to produce the conviction, and nothing can eradicate it. We see a relation between the properties of what we call the cause as powers, possessing a potency, and the effect that brings the effect out of non-being into being. Hume did the cause of theism a signal service. He showed, in his illustration of the two billiard balls, that one was not the efficient cause of the motion of the other, for they might lie on the table together forever and there would be no motion. Nor was the cue the efficient cause. Nor was the arm that held the cue more than an instrumental cause. Hume stopped too soon. Had he passed back to the mind, to the energizing will that controlled the arm and directed the cue, he would have found a spontaneous, self-acting ,energizing power, power in action, causing the entire series of phenomena. Hume did a great service to theism. He showed that there is no real causation, no spontaneous, self-acting power or energy in matter. Matter is never an efficient cause, but only an instrumental or second cause. Matter is never a spontaneous, self-acting original cause. Nor is physical force ever a spontaneous, self-acting original cause. It is never more than an instrumental or second cause. Let us remove some erroneous conceptions that cluster around this subject. Matter is essentially and necessarily passive and inert. The first law of motion demonstrates and declares this. Hence, it can not be an agent or actor, or an efficient cause, or a cause in the sense of a spontaneous, self acting cause, and the original cause. It can never be more than the instrumental cause, and the original, the efficient, the spontaneous, self-acting cause must be back of matter and distinct from it, using it as its instrument. Physical force is not an original efficient cause, for it is not spontaneous and self-acting or self-directing. Motion is not a force, although it is almost invariably spoken of as one. Motion is merely a change of situation by matter in which it is passive and acted on by force. Force is an exercise of power by an actor, or agent, or efficient cause. Force and matter may be used by an actor or agent as second or instrumental causes, but the efficient cause, the agent or actor, or original cause, is mind or will power in action, acting to produce a purposed result. When we speak of matter and physical force as causes, it is only as instrumental or second causes. We affirm that mind is the only agent or actor or efficient cause in the universe. It is the only self-acting, spontaneous original cause in the universe. All else is secondary or instrumental causation, either immediately or mediately by means of implanted power implanted by mind. Mind alone acts. Matter is acted upon. Mind acts and exercises power. Such exercise of power is called force, and force causes the motion of matter, and the effects we see in matter, or the universe.

Then what we call force in matter and physical force or forces, is power implanted in matter by mind. The co-ordination, adjustment and adaptation of force, show that it was implanted by mind, and is regulated and controlled by mind in its effects. Then motion and action are not the same. Motion is a passive change of situation by matter, caused by force, which is an exercise of power by an agent. Action is a spontaneous exercise of power by an agent or mind. Power is inherent in mind alone. We say results in nature are produced by physical causes or forces, in an accommodated sense only. These forces are exercises of power. Power is inherent in mind alone. An agent or mind implanted these powers, that we call forces or causes, and co-ordinated and controls them. Force, then, is an exercise of power by an agent, and never, in the true sense of the term, an agent. It only acts as an instrumental or second cause, and is a cause only in the same sense. Causes, in the true sense of the term, original causes, do not, themselves, have causes, and are not effects. Causes may have occasions that impel them to act, or conditions under which they can or will act, but the agent or efficient cause, the real cause, is the actor, the spontaneous, self-acting agent. Motion is not a cause, but an effect. Real cause is never an effect. Motion is not action, nor an exercise of power or force by a cause. Motion of body and acts of mind are not the same, although materialists confound them. Bodies move when influenced by force, which is an act of an agent, or an exercise of power by an agent. Mind acts, and does not move. Its acts produce motion in bodies. Then all effects in the universe are either immediately the results of the exercise of power by an agent or acts of mind; or mediately through matter and force as second or instrumental causes — mediately through property or force implanted in matter, or property implanted in force by mind. Then our idea of causation is derived from our consciousness of our minds or wills as energizing power, or power in action, producing effects. All causation, either mediately or immediately, inheres in an agent or actor, or spontaneous, self-acting agent or mind. We ascribe spontaneity, self-activity and self-regulation and control to mind and mind alone. Hence, all spontaneity, self-activity and efficient causation has its ground in mind. We are not necessitated to run through an endless chain of causes and effects, for reason declares that there must be that which was not an effect, that which had no cause, but is the ground and source of all causation. The atheist admits this when he assumes the eternity of matter and force, and assumes that they are uncaused and the source of all being. Our reasoning has stripped matter and force of all causation, of all spontaneity, self-activity and self-regulation, such as must inhere in efficient and original causation. It has made them effects and the instruments of mind. It has placed all efficient causation in mind. The uncaused, the cause of causes, must be absolute mind.

We have, also, these intuitions. Co-ordination, arrangement, adjustment, adaptation, in a system or method, exhibiting plan, design and purpose, with prevision of, and provision for, subsequent phenomena, controlled by law, exhibiting and realizing the highest conceptions of reason, can not be evolved by matter and force, can not come from matter and force, are not in matter and force. They are not the properties or products of blind, insensate matter and force. Can not be evolved out of them. We intuitively recognize them as attributes or acts of mind, and mind alone; and throw them back on mind as their only conceivable ground. We have intuitions of moral qualities in persons and the acts of persons, and only in persons and the acts of persons. We have intuitions of good and evil, righteousness and sin. These ideas impose obligation. They look to a higher power than man, to which the obligation is due. The idea is intuitive that our actions are rewardable. We have the intuition that we enjoy blessings as rewards, and suffer evil as punishment. We feel that these rewards and punishments come from a higher power. We have intuitions that the world is controlled according to these principles. These ideas refer to a mind to which we are responsible as lawgiver, ruler, judge and executive.

Before leaving this preliminary work, we remark, in conclusion of it, that we no more affirm that a man is born with intuitive ideas than we affirm that he is born walking, talking, or eating, or thinking. We affirm that he is born with powers that, when developed, will enable him to do the physical part of walking, talking, or eating, but the muscles need development and training. The power is there and the faculties and principles that control the power are there, but they must be aroused, developed and applied. So the mind has certain constitutional powers and faculties, and inherent regulative principles, that control these powers and faculties, and lead them to certain results. The senses furnish the occasions that excite the faculties of the mind to action. In accordance with these regulative principles and its own inherent constitutional nature, the mind has certain original convictions. Is compelled to have them by the laws of its own thinking, and to act in accordance with them. These conceptions are intuitions, self-evident, necessary, catholic or universal, and express the relations and the nature of things. These original convictions are self, and not self—mind and matter—mind and its rational, moral attributes, matter and its physical properties. Mind alone is spontaneous, self-active, efficient cause. Matter and physical force are not spontaneous, self-active, efficient causes. They are merely instrumental or secondary causes. For matter is inert and passive, and force has no spontaneity or self-direction. We have ideas of space, time, causation and infinity; and of infinite space, time and causation, and of dependence and contingency. We have rational ideas of order, law, co-ordination, adjustment, design, plan, system, method, prevision and provision. We have intuitions of right and wrong, and of moral qualities in persons and acts of persons. We have intuitions of responsibility, obligation and retribution. We do not obtain these ideas from physical nature, but with them furnished in consciousness, by our reason, we recognize the application of them in the physical world. We are conscious that our mind is one conscious thinking, willing, moral, responsible unit or self. That our mind has attributes or powers and faculties, and is not an organism with organs or parts. There is harmony of attributes and powers, and not order and arrangement of parts or organs.

Then our knowledge is based on sensation, consciousness, intuition and revelation. Using all these sources of knowledge, and basing our argument on the above intuitive ideas, we shall now proceed to our argument, and endeavor to establish our thesis—"The beginning of all being, the ground of all causation and condition and being, is an absolute, intelligent cause, or self-existent, eternal mind or spirit." The causes that impel man to a course of reasoning that would lead to the idea of God, are: 1st. A sense of dependence. 2d. The idea of causation and the recognition of causation in nature. 3d. An apprehension of the infinite. These impel men to begin and prosecute inquiries concerning the cause of all things. We postulate the following axioms or self-evident truths:

I. Order, arrangement, co-ordination, adjustment and adaptation imply design, purpose, system, method, law and plan. No rational mind can deny this.

II. Design, purpose, method, law and plan imply a designing, planning mind, that has designed and planned the order, method and system for some purpose or end. No rational mind can deny this.

III. A regular and invariable recurrence of the same phenomena, in the same sequence and connection in time, space and relations, implies order, law, system, method and plan. No rational mind can deny this.

IV. The idea of causation is a fundamental intuition of all reason. Reason intuitively pronounces certain things causes and others effects. Any phenomenon brought out of non-being into being by something else is an effect. A cause is that which brings something else out of non-being into being. Man intuitively sees a relation between the properties and powers of certain things, and other things, that give to the first a potency to bring the second out of non-being into being. He sees more than invariable succession and connection. He sees a potency in one that brings the other into being. It is not a generalization of accumulated experiences, for man has the intuition before he can generalize, and generally after one observation.

V. A regular and invariable connection between a thing or a system of things in precedence, and a phenomenon or system of phenomena in sequence, demonstrates cause and effect, when we see a connection between the properties and principles of the first to bring the second into being—a potency in the first to produce the second as a result.

VI. Like causes produce like effects, and like effects must flow from like causes. Hence, every effect must have had an adequate cause. An effect implying intelligence must have had an adequate cause, an intelligent cause.

VII. In all our investigations and reasonings, we pass from the understood and known to the borders of the inexplicable and unknown. We can and do apprehend the existence of things, and know that they exist, when we do not comprehend how and why they exist, nor understand how they can be as they are, nor why they are as they are. We are conscious that there is a connection between body and mind; and yet we do not understand how they are connected as they are, nor why they are thus connected.

VIII. In all our reasonings, we pass from a knowledge of the finite to an apprehension of the infinite. From finite portions of space, through a relative infinity of space, we rise to an apprehension of absolute infinite space. From a relative infinity of duration, we rise to an apprehension of absolute infinite duration or eternity. From a relative infinity of microcosms, we rise to an apprehension of the macrocosm or universe. From a relative infinity of causes, related as a harmonious system, we rise to an apprehension of the Absolute Cause, and the Uncaused. From a relative infinity of the contingent, connected in a system, we rise to an apprehension of the Necessary, as their only conceivable ground. From a relative infinity of the conditioning and the conditioned, related as a system, we rise to an apprehension of the unconditioned, the condition of all being. From a relative infinity of finite beings, related in an order pervading the universe, we rise to an apprehension of the Absolute Being, the ground and summation of all being. From a relative infinity of finite displays of force, co-ordinated as a harmonious system, we rise to an apprehension of Infinite Force or Omnipotence. From a relative infinity of finite displays of intelligence, united into a system realizing the highest conceptions of reason, we rise to an apprehension of Absolute Intelligence, or God. We simply affirm that we have these apprehensions of the infinite in each field of investigation and thought. The undeniable fact that every dialect on earth has terms expressing these apprehensions, and that man has always had terms expressing them, demonstrates that he has the apprehensions. We do not now assume that these apprehensions are all valid, and that the objective reality corresponds with the subjective notion, though if our nature be reliable, and a valid basis for reasoning, and a valid instrument of reasoning, and if reasoning be at all possible, these apprehensions are valid and true. So, also, since the atheist as well as the theist, and as implicitly as the theist, accepts the verity of our apprehensions of infinite space, infinite time, and infinite being in matter and force, and that they are necessary and unconditioned, we might put him to the proof to show why we shall not accept the equally universal apprehension of infinite intelligence. The reader will observe and be careful to remember that we say *apprehend*, and not *comprehend*. We must not confound perception with perfect knowledge, or apprehension with comprehension. We do apprehend the existence and characteristics of things that we do not comprehend. When we assert that we can not apprehend the infinite, we do apprehend the infinite and some of its characteristics in our affirmation itself.

We see all about us properties, attributes and qualities, the predicates of subject. We can compare them and classify them, and generalize and learn the nature of subject. We see protension, movement and succession—events transpiring in time, and having a beginning, succession, order and arrangement, expressive of power, regulated power, which throws these characteristics back on the power that produced them. We see things having a relation to each other—co-ordinated and having a relative unity, which suggests absolute unity. We see things conditioned in time, space and causation, which suggest the unconditioned, the ground and summation of all condition. Man is conscious that he is one conscious, thinking, willing, planning, moral, responsible self. He is conscious that there is in him an energizing will, which is power in action controlled by intelligence. That there is in himself intelligent causation, producing order, co-ordination, adjustment and adaptation, into a system or method, exhibiting design, purpose and plan, with prevision of future results, and provision for their production, and for them in accordance with law of reason, and realizing the conceptions of his reason. He is conscious that there is this intelligent causation in himself, in addition to and above matter and force, and controlling and using matter and force for his own purposes and ends. The following facts are found in nature, are found pervading the entire universe, which have their necessary ground in mind, and have a necessary relation to reason and thought as their source: Numerical and geometrical relation and proportion; the definite relation and proportion of the elementary substances in chemical action; symmetrical and geometrical relation and arrangement of parts in crystallization and exact geometrical form in crystallization; the numerical and geometrical relation of the forces, orbits, forms, motions, masses, distances and densities of the heavenly bodies and their orbits, all of which have an exact mathematical proportion and expression, realizing some of the most exalted and profound truths of this most abstract of all departments of pure thought. These realizations of the most exalted conceptions of reason have a necessary ground in mind, and a necessary relation to absolute reason and thought, as their only conceivable ground. The arrangement, co-ordination, adjustment and adaptation of all forces in the universe as to when, how long, how often, in what order and succession, and where and with what power they shall act, imply order, system, method, design, plan and law. The uniform succession of new existences, and the progressive evolution of new forms out of previous types, implies design, plan, law and system. The evolution of new species conformable to fixed and definite ideal archetypes, great ideal archetypes as controlling ideas, indicates a comprehensive plan, law, order, method, adjustment and design. All these have their necessary ground in absolute reason and thought. The adaptation of organs to fulfill special functions necessitates adjustment, design and plan. Diversified homologous organs made to fulfill analogous functions, widely different organs fulfilling the same functions, and the same organs fulfilling widely different functions, yet maintaining a general plan, necessitates foreknowledge, alternativity, choice, plan, purpose, with prevision of, and provision for, certain ends. These have a necessary ground in reason. These highest ideas of reason are realized in the smallest atom and each and every atom—each organ, each function, each organization, each species, each order, each planet, each system, and, in the universe, the Infinite Cosmos. They have their necessary and only conceivable ground in reason and thought.

We have also these ideas in the universe which have a necessary relation to moral ends and ideas, and can be grounded only in personality or mind. The universal tendency to discriminate between acts as voluntary and involuntary, and to further discriminate between the former as right and wrong, indicates a relation to an immutable standard of Right. The universal sense or consciousness of obligation and dependence indicates some relation to supreme power or absolute authority. The universal consciousness of responsibility and accountability for actions, and that we endure the consequences of our conduct as a reward or punishment, indicates a relation to a supreme judge. The happiness that we intuitively recognize as a result of good conduct, and the evil resulting from evil conduct in this life, and the universal expectation and conviction that it will be so in a future state, indicates a relation to a Supreme Executive. The integrity and verity of our nature must be denied, and all reasoning rendered impossible, if we deny or repudiate these catholic ideas of universal reason. They are the highest and greatest realities of the universe, and basis ideas, acting as motive powers, urging us on in our theistic researches and reasonings, and leading us to reason and thought as the ground of all being. Our general proposition then is, that man intuitively reasons that every effect must have had an adequate cause. As a catholic affirmation of universal reason, based on universal intuitions of reason, arising from the phenomena and the characteristics of phenomena revealed in sensation, man concludes that the universe is an effect, and an effect that must have had an intelligent cause. Or it is an affirmation of universal reason that the Absolute Cause, the Ground of all Being, must be Absolute Mind.

To this course of argument the following objections are urged:

I. It is denied that man would prosecute a course of reasoning on cause and effect in Nature.

II. It is urged that it is unscientific and futile for him to do so.

III. It is denied that he would conclude that the Universe is an effect, or that he could prove it to be such.

IV. It is denied that he would reach Intelligent Cause. It is urged that man can reach only matter and phenomena, or matter and force in nature, hence he would conclude that the cause of all was a physical cause, and he never would rise to an apprehension of an Intelligent Cause, or any cause but a physical cause.

V. It is denied that he ever would rise to an apprehension of an Absolute Cause. He would run through an endless series of causes and effects, and never could or would rise to an apprehension of a First Cause.

VI. It is urged that he might rise to an apprehension of an Artificer, Ruler and Judge, but not to an idea of a Creator.

VII. It is urged that man would have an idea of the eternity of matter and force, as well as mind, and only have an idea of a finite Artificer, Ruler and Judge. Such was Mr. Mill's position.

VIII. It is urged that the argument has more in the conclusion than there is in the premises. The premises are finite, but the conclusion is infinite, hence the argument is not legitimate.

IX. It is objected that when we expand our conception to infinity, it breaks down and becomes worthless, for it passes beyond our grasp.

X. It is urged that since the First Cause is infinite, and our greatest effect finite, we can not bridge the chasm between the greatest effect and our Cause. We can neither lift our greatest effect to our Cause, nor bring down our Cause to our greatest effect.

XI. It is urged that we can not have any knowledge, even an apprehension of the infinite; hence when we make the first Cause infinite we relegate it to the domain of the unknowable and unthinkable.

XII. Finally it is objected that we anthropomorphize God, make him in our own image, and finite him, and make him imperfect. If we attempt to avoid this, and expand our conception, and strip it of errors, it becomes valueless, for it passes beyond our grasp. It passes into the dominion of the unthinkable and unknowable. In either case we destroy the conception of God, either by finiting Him or by making him unknowable.

To the first objection we reply that man has an intuition of causation, which he uses in all his actions. As a matter of fact he has always prosecuted such researches and reasonings. To the second we reply that a more caricatured travesty on science was never conceived than the positivist conception of science.—Learn how and when phenomena transpire in time-succession, and be content therewith! It ignores the fundamental intuition and idea of all science, the intuition of causation. All science is based on and built up by means of this idea of causation. The positivist's conception strips phenomena of all connection of rational ideas, and they fall to pieces in our hands. It serves nature as Medea did her brother Asbyrtis; and all attempts to unite the *disjecta membra,* the isolated phenomena, are as futile as the attempts of the father to put together the fragments of his slaughtered child. So far from inquiry into causes being futile and unscientific, it is the animating principle of all true science; and all the glorious results of science are the results of such inquiry. To the third objection we reply that man has ever regarded the universe as an effect—at least its present constitution. The evolutionist and atheist regard the present constitution of things as the effect of development or evolution. It can be demonstrated to be an effect. A regular and invariable connection between things or a system of things, and phenomena or a system of phenomena, implies cause and effect, when there exists a necessary and obvious relation and connection between the principles and properties of the things, as powers, and the phenomena—giving to the former a potency to bring the latter into being. The universe is a regular and invariable connection and relation between things and systems of things, and phenomena and systems of phenomena, in which there is a necessary and obvious connection between the forces and properties of things and the phenomena, giving a potency to these forces and powers to bring the phenomena into being as effects. Therefore the universe is a system of causes and effects. The macrocosm is a unity of matter and its forces, or a unity of systems of matter and forces, producing co-ordinated and correlated phenomena, or co-ordinated systems of phenomena, or a unity of phenomena. A unity or system of matter and force, producing a unity or system of phenomena, or one effect, gives us one cause producing one effect. Hence in the Cosmos we have but one cause, producing but one effect. There are but two ways of evading this. One is to deny all causation. This is so palpable an abdication of reason, that we need not notice it further. The other is to deny the unity of the forces and the phenomena. The generalizations of the physicist himself shall be our answer to this. He, in his generalizations, makes the forces a co-ordinated system or unity, and of the phenomena a co-ordinated system or unity.

Here the materialist stops. He assumes the eternity of matter and force, and that they are the ground of all being and phenomena. He contends that when we have reached matter and force, we have reached the ground and origin of all being. There are two queries to be answered before we accept his position. Is the materialist justified in excluding *Intelligence* or Mind from the ground and origin of all being?

Are we not justified, nay, compelled to rise from matter and force to Mind or Intelligence, anterior to matter and force, and make it the ground of all being?

The materialist overlooks the highest and most important cause in the domain of nature, in fact the only efficient cause in nature, man's mind or energizing will and volition in action. We are conscious that we have in ourselves reason, intelligence, thought, design, contrivance, adaptation, adjustment, order, system, law, and plan, or that our mind is an intelligent cause, producing these results in our action, and that they can be produced by us only on account of our intelligence, free will, and volition. These ideas of law, order, and plan are borrowed by the materialist from the domain of mind. They arise from man's consciousness of moral order and obligation and law. We have the idea of law, to start with, in our physical and scientific researches and classifications, from our consciousness of duty and law. It arises not from an external observation of what is, but from an internal conviction of what should be. The materialist admits that we are compelled, by the constitutional tendency of our mind, to classify phenomena according to ideal conceptions, or rational ideas. Hence we have this idea from reason, and not from observation.

We have the idea of causation from our consciousness of an energizing will, which is power in action, controlling our powers and organs, as second causes, to produce effects, our acts. We have the idea of order, only as we have the idea that our mind is a unit, producing a totality of personal phenomena, our conduct; and that all the varied personal phenomena constitute a whole. We have from consciousness, and an intuitive exercise of our reason, this idea of our mind as an intelligent cause, producing co-ordination, adjustment and adaptation, into an order, method and system, and exhibiting design, purpose and plan. We regard our powers as second causes, controlled by an intelligent, spontaneous, self-acting cause, the efficient cause, our mind. We intuitively recognize co-ordination, adjustment and adaptation, design, plan, system and law, with prevision of, and provision for, ing, or eating, or thinking. We affirm that he is born with powers that, when developed, will enable him to do the physical part of walking, talking, or eating, but the muscles need development and training. The power is there and the faculties and principles that control the power are there, but they must be aroused, developed and applied. So the mind has certain constitutional powers and faculties, and inherent regulative principles, that control these powers and faculties, and lead them to certain results. The senses furnish the occasions that excite the faculties of the mind to action. In accordance with these regulative principles and its own inherent constitutional nature, the mind has certain original convictions. Is compelled to have them by the laws of its own thinking, and to act in accordance with them. These conceptions are intuitions, self-evident, necessary, catholic or universal, and express the relations and the nature of things. These original convictions are self, and not self—mind and matter—mind and its rational, moral attributes, matter and its physical properties. Mind alone is spontaneous, self-active, efficient cause. Matter and physical force are not spontaneous, self-active, efficient causes. They are merely instrumental or secondary causes. For matter is inert and passive, and force has no spontaneity or self-direction. We have ideas of space, time, causation and infinity; and of infinite space, time and causation, and of dependence and contingency. We have rational ideas of order, law, co-ordination, adjustment, design, plan, system, method, prevision and provision. We have intuitions of right and wrong, and of moral qualities in persons and acts of persons. We have intuitions of responsibility, obligation and retribution. We do not obtain these ideas from physical nature, but with them furnished in consciousness, by our reason, we recognize the application of them in the physical world. We are conscious that our mind is one conscious thinking, willing, moral, responsible unit or self. That our mind has attributes or powers and faculties, and is not an organism with organs or parts. There is harmony of attributes and powers, and not order and arrangement of parts or organs.

Then our knowledge is based on sensation, consciousness, intuition and revelation. Using all these sources of knowledge, and basing our argument on the above intuitive ideas, we shall now proceed to our argument, and endeavor to establish our thesis—"The beginning of all being, the ground of all causation and condition and being, is an absolute, intelligent cause, or self-existent, eternal mind or spirit." The causes that impel man to a course of reasoning that would lead to the idea of God, are: 1st. A sense of dependence. 2d. The idea of causation and the recognition of causation in nature. 3d. An apprehension of the infinite. These impel men to begin and prosecute inquiries concerning the cause of all things. We postulate the following axioms or self-evident truths:

I. Order, arrangement, co-ordination, adjustment and adaptation imply design, purpose, system, method, law and plan. No rational mind can deny this.

II. Design, purpose, method, law and plan imply a designing, planning mind, that has designed and planned the order, method and system for some purpose or end. No rational mind can deny this.

III. A regular and invariable recurrence of the same phenomena, in the same sequence and connection in time, space and relations, implies order, law, system, method and plan. No rational mind can deny this.

IV. The idea of causation is a fundamental intuition of all reason. Reason intuitively pronounces certain things causes and others effects. Any phenomenon brought out of non-being into being by something else is an effect. A cause is that which brings something else out of non-being into being. Man intuitively sees a relation between the properties and powers of certain things, and other things, that give to the first a potency to bring the second out of non-being into being. He sees more than invariable succession and connection. He sees a potency in one that brings the other into being. It is not a generalization of accumulated experiences, for man has the intuition before he can generalize, and generally after one observation.

coming existences and events, to be the result of intelligent cause, and that alone. A man who denies this, is unworthy of one moment's reasoning. In the regular recurrence of the same phenomena, under the same circumstances, which the materialist admits, and which he calls law, we see order. In the harmonious working of the forces of nature, which he calls acting under law, we see co-ordination and arrangement. In the operation of these forces, to produce the same phenomena, we see a systematic and methodical adaptation of the forces to produce the phenomena. In the uniform action of each animal and plant, in accordance with the laws of its being, we see that the animal was designed for this life as an end. In the harmonious operation of all of the forces and existences of nature, we see adjustment of the forces and existences to each other and the whole of nature. In the regular development of nature forward on a scale of progression, which the materialist calls evolution, we see plan, provision, and forethought. In the preparation for coming phenomena, and in the arrangement of forces to produce them, and in the correlation of other existences to meet them, seen all through nature, we see provision for them, forethought and providence. All these facts or ideas that pervade all nature, have their necessary and only conceivable ground in mind. A man who denies either the fact or the deduction from it, is not worthy of one moment's notice.

As man is conscious that co-ordination, adjustment, and adaptation into order, system, and method, exhibiting plan, design, and purpose, according to law, and displaying prevision and provision, in his own operations, have their ground in his own personal thinking, willing self, as an intelligent cause; so he reasons, and is compelled to conclude that adaptation, design, plan, law, and providence in nature have their necessary and only conceivable ground in a personal, thinking, moral being or intelligent cause.

Then man is compelled, by what he sees in nature, to rise above the forces of nature and matter and its properties, to an intelligence anterior to them and above them. There are but two ways to evade this. One is to deny that there is co-ordination, adjustment, adaptation, design, method, system, plan, law, forethought, and providence in nature. The man who does this is not worthy of one moment's notice, for the writings of the most eminent evolutionists abound in descriptions of nature, in which these characteristics are recognized as the essential characteristics of nature, even while attempting to disprove them, and in the expressions denying them. The other is, to deny that they necessarily imply the pre-existence of intelligence. This also is the abnegation of all reason and sense. As this is the crucial question of the whole discussion, we will elaborate it further. There are sixty simple original elementary substances in nature. These combine by cohesion to form homogeneous substances. They combine by affinity to form compound substances. Some of these will combine only with certain others, and not with others. They combine only in definite mathematical proportions. Parts of compound bodies combine with certain simples, and with certain parts of other compound bodies, and always in exact mathematical proportions. Different proportions give entirely different substances. Thus, out of only sixty elementary substances, are formed the almost infinite variety of compound substances in existence, and always in accordance with the most exact mathematical law and proportion. This gives co-ordination, adjustment, law, and plan, and system, before the first constitution of matter. It places mind anterior to the primordial constitution of matter, to originate and realize these great rational ideas in the primordial constitution of matter. It does away with all idea of the self-existence of matter, for it makes of matter a subordinate agent, a manufactured article, the product of mind in its primordial constitution, and places mind anterior to matter, to give to it its first constitution. Then before the very first constitution of matter, there was in idea co-ordination, adjustment, adaptation, order, system, plan, law, and forethought, and prevision of, and provision for, what was realized in the first constitution of matter, and what afterward appeared in its combinations. There was mind, in which these ideas existed, an originator, and as this was before the first constitution of matter, or before matter existed, a creator of matter, and of all except himself, an Absolute Cause.

Again, the essential properties of matter existed in it in its first constitution, or at its first existence. We can not conceive of its existence without these essential properties or forces, as they are sometimes called, attraction, repulsion, adhesion, cohesion, affinity, rejection, electricity, heat and crystallization. These are co-ordinated, adjusted and adapted, as to where, and when, and how long, and how often, and in what order, and with what power they will act. They are co-ordinated, adjusted and adapted in an order, system and method according to law and plan. They are co-ordinated and adjusted in like manner to act, react and interact. This necessitates forethought, prevision of, and provision for, all this, and plan, system and law, before the first action or existence of these essential properties of matter. As we can not conceive of matter existing without these properties, they enter into its primordial constitution. Again, we prove matter to be a manufactured article, a subordinate agent; and, again, do we prove that mind was anterior to the first constitution of matter, originating and realizing the co-ordination, adjustment, plan, system and law realized in the primordial constitution of matter.

There is adjustment, adaptation, system and prescient plan and provision in the primordial constitution and form of things. From sixty elementary substances, in consequence of their properties, we have all of the almost infinite variety of existences and substances differing so widely from each other. These qualities and properties were designed, planned, adjusted and arranged in these elementary substances, before they existed, before their first constitution. Before the first constitution of things these ideas existed, for they are realized in the first constitution; number of first elements or elementary substances; the amount of each elementary substance in the whole; the properties and characteristics of each elementary substance; the essential properties of matter, and the forces of matter, and their essential characteristics; forms of matter, such as solidity, fluidity and gaseousness.

These are necessary to existence and motion. The susceptibility of change of form, from one form to another: the forces to produce such change of form. These forces have all been co-ordinated, adjusted and adapted, as to where, and when, and how long, and how often, and in what order, and with what power they will act. All force, in all these particulars, acts in exact mathematical proportion and law. Chemical action does also. So does crystallization. It is in accordance with exact geometrical proportion and law, in form and relations. The very highest conceptions and ideas and laws of reason are realized in the first constitution of things. This necessitates co-ordination, adjustment and adaptation into order, system and method, exhibiting design, purpose and plan, according to law, expressing and realizing the highest ideas of reason in the very primordial constitution of things. This necessitates the existence of mind anterior to such first constitution, in which these ideas originated. These fundamental characteristics of the primordial constitution of things, prove matter to be a manufactured article, a subordinate agent, the product of mind. They place reason anterior to the first constitution of matter and force, the very primordial constitution of all things, to give to them this primordial constitution, and as the ground and source of all being. The thoughtful attention of all materialists is called to this argument. With a grasp as relentless and resistless as the destiny that he assumes controls all things, it places him face to face with the first constitution of all things, and proves matter and force to be manufactured articles, subordinate agents, the products of mind, disproving the self-existence of matter and force, and places mind anterior to matter and force, to give to them their very primordial constitution, or to create them. It compels him to recognize, in the primordial constitution of things, the realization of the highest conceptions of reason. It compels him to recognize the fact that mind existed anterior to matter and force, and gave to them their first constitution, or created them. It compels him to rise above matter and force, to their Creator, existing anterior to them, and make mind the ground and beginning of all being.

Let us here notice a fallacy of the materialist. He covers up the lack of causation in his speculations, the lack of connecting links of thought, the lack of any rational explanation of phenomena, by convenient phrases, such as "laws of nature," "nature of things." Doubtless, nature has laws in accordance with which it acts, or a manner of acting, and doubtless all things have a nature. But when the materialist talks of laws of nature producing that nature in which they inhere, and without which they themselves could not exist, and of the nature of things giving a nature to things, he confounds antecedent and consequent, cause and effect. It is an attempt to cover up the nakedness of a system with the fig-leaves of a convenient phrase. There is a reason for the use of such evasive expressions. Such are the characteristics of the laws of nature, and the nature of things, that we can not describe them without using terms that imply the pre-existence of mind, and the operation of mind in them. The only terms that the materialist can use in his descriptions of nature, and in his speculations, from the very nature and constitution of our thinking, imply the pre-existence of mind, to give to them these characteristics. Does he say fixed laws? Who fixed the laws? Does he say established laws? Who established the laws? Does he say order of nature, or orderly laws of nature? Who gave to nature and its laws this order? Does he say invariable, unchangeable, unalterable laws? Who gave to the laws their co-ordination and adjustment in this invariable operation? Every expression, from the nature and constitution of our thinking, implies the pre-existence of mind, that fixed, established, regulated, set in order or adjusted the laws of nature or the nature of things. Then, in the present constitution of things, and all along the stream of being, until we reach the primordial constitution of things, and in this primordial constitution especially, we find characteristics that, by the laws of its thinking, reason is compelled to throw back on pre-existent mind as their necessary and only ground. Then mind is the ground and beginning of all things.

The attempt of the evolutionist to escape intelligent cause by his hypothesis of evolution, is as senseless as the course of the ostrich, that seeks to escape its pursuer by thrusting its head into the sand. Suppose that we admit that the germs of all things, and all forces now in operation, existed in the primordial constitution of things, and also that all conditions existed there also that brought these forces into play and developed these germs and forces into what now exists; we are compelled to step further back and ask: "Whence came these germs, these forces, and their properties, these conditions and laws? Whence came the adaptation, co-ordination and adjustment of these conditions, forces and laws?" These imply anterior to that first constitution, with which the evolutionist starts, co-ordination, adjustment and adaptation, design, purpose, system, plan and law, for this course of evolution and for all the order, beauty and harmony that now exists. The materialist can not stop until he reaches that which has its only ground in mind. He is compelled, unless he, ostrich-like, hides his head in some ambiguous phrase, or madly dethrones reason, to recognize mind as the ground and beginning of all things.

But let us examine more carefully the course of progressive development that is claimed by modern science, and that the materialist claims obviates the necessity of a God, and disproves his existence. Science teaches that the world's history has been divided into epochs, characterized by changes in the order and constitution of things. In each epoch there has obtained a certain condition of things and existences suited to such condition. There was a uniform succession of the same types as long as the world was suited to them. There was a gradual change of conditions, during which existences became unfitted to surroundings, and the earth became fitted for higher existences. There was a degeneracy of lower types and a final extinction, and a substitution of higher types, for which the earth was fitted. These various successive types were introduced in their highest perfection at their first appearance. There was a progressive evolution of new orders, in successive steps, in conformity to fixed ideal archetypes, showing a comprehensive plan, a pre-existent design and control and government.

As the introduction of new species was by successive steps, and in their highest perfection at first, they were creations. Our conclusion, then, is that a progression on an ascending scale must have had a beginning when materials were adjusted and proportioned, and forces co-ordinated and adapted to produce the progression. The created series are developed by successive steps, and according to a plan, with a distinct end in view, hence the end must have been contemplated from the beginning. The process is characterized by intelligence and unity, and the results by moral quality, hence the cause must have been an intelligent, moral Power, adequate to the production of such phenomena, or God.

This argument can be built up from another series of observations. There is co-ordination, adjustment and adaptation, into order, system, and method, exhibiting design, purpose and plan, in accordance with law, expressing and realizing the highest ideas of reason, in the present order of things. In the form, quantity, selection and purpose of all that now exists, and also in the manner of acting, as to where, when, how often, how long, in what order, and with what power they shall act, all these characteristics appear in every step. There was plan, prevision and provision for man and animals millions of years before they existed, according to geology. Igneous rock is the basis, and stratified rock that man uses is easy of access. Metals are prepared for his use, and placed where they were protected from destruction, and yet where he has access to them.

Vast vegetable growths, that had no conceivable use when growing, were buried millions of years ago in coal-beds, protected from destruction, and yet accessible to man for whom they were prepared. Rocks, coal and metals are placed where they will not interfere with man's wants, and yet meet his wants. Coal and metals are near each other. Coal is in countries where it is needed. It was not until man appeared that the object of all this preparation could be apprehended. The drift period prepared and mixed the soils for cultivation. Domesticable animals appeared with man. In all this we see law, design, prevision of, and provision for, coming existences. The adaptation of organs and existences to ends, and of agencies in nature to definite purposes, imply design, plan, forethought and intelligence. The theory of adaptation by unconscious selection of unintelligent forces is unconscious nonsense. Either existences were adapted to conditions at first, or they were not. If they were adapted at first, who adapted them? If they were not adapted, how did they exist in this unadapted state until adapted? To say that unadapted conditions adapted them, or produced adaptation, is to substitute destructive agency for constructive cause. This bringing existences together in time and adaptation, shows intelligence, forethought, plan and adjustment.

The historic development claimed by the evolutionist, and the progress wrought out in it, establishes design, plan, government and providence. This is especially evident when we reflect that this development has been produced in each nation by influences from without. There has been no spontaneous civilization. Then in the primordial constitution of things—in the provision made in such first constitution for the development that followed—in the course of development—in the present order of things and in the progress of human history, there has been system, law, intelligence and will—one cause, one intelligence, one mind. Or mind is the absolute cause or ground of all being. We have thus in every department of research traced the stream of thought back to the fountain—to the idea of ideas—the underlying idea of all thought, and found it to be Mind, Intelligence or God, the Cause of Causes, Jehovah, the only Self-existent One. We have, we believe, demonstrated that the Cause of Causes is Absolute Mind.

We come now to the fifth objection urged against the theistic argument. Man could not rise to an apprehension of an infinite or absolute cause. He would run through an endless series of finite causes and effects, and never rise to an apprehension of the absolute in causation. We affirm that we do rise to an apprehension of the infinite in every department of thought. From a knowledge of the finite, we pass through the relatively infinite to an apprehension of the absolutely infinite. We take the materialist himself as our proof of this. He assumes the absolute infinity of space and time, and the self-existence of matter and force, the eternity, self-existence, independence, and self-sustenance of matter and force. He has the absolute, the infinite, the unconditioned in space, duration and being, in matter and force. All men, but a few atheists, affirm as positively the infinite, the absolute, the unconditioned in mind. The materialist is evidence that man does rise to an apprehension of the absolute, the infinite and unconditioned, and that he can do so. The fact that nearly all men do affirm that the Absolute, the ground of all being, is Mind, proves that they do rise to an apprehension of Absolute Intelligent Cause. The fact that the materialist denies that man can do so, is proof that he can, for he, in his denial, does what he affirms can not be done.

But it is urged that we could only have an idea of an Artificer, a Ruler, Judge, and Executive, but not of a Creator. We need only refer to our demonstration that matter and force are subordinate agents, manufactured articles, to refute this objection.

Atheists have lately made a desperate attempt to destroy the design argument. They are conscious that unless it be destroyed, men will always accept the existence of God as a demonstrated truth. Even theologians and eminent divines have conceded that the design argument is untenable. We propose to show that they have acted hastily, and to vindicate this grandest of all theistic arguments, and to show that the objections are utterly fallacious. The design argument is as impregnable as the throne of the Eternal One, whose existence it so clearly demonstrates.

The most famous attack on it is the application of *reductio ad absurdum.* It is said, if order and arrangement imply design and contrivance, and design and contrivance imply a designing mind, then as God has order and arrangement in his attributes, there is design and contrivance exhibited in his being; and if design and contrivance be exhibited in his being, then there must have been a designing mind, that contrived and designed this order and arrangement, and so on, *ad infinitum*. Again, if adaptation in nature implies intelligence that produced this adaptation, then as God is adapted to the work of the creation, government and sustenance of nature, there must have been an intelligence that adapted him, and so on, *ad infinitum*. This attempt to destroy the design argument is subtle, but it is a fallacy, nevertheless. The first fallacy is in a confusion of terms—a confusion of things, not at all similar. We are conscious that we have one indivisible, unit mind, one conscious, willing, planning, reasoning, free, moral, responsible entity, or self. So we intuitively conclude that the intelligent cause, the absolute mind, is one indivisible person or being. We are conscious that our mind has attributes or faculties, but not organs or parts like a material organization. We intuitively conclude that the infinite mind has attributes, and not organs or parts. We know that there is harmony of attributes in our mind, and not order and arrangement of parts or organs, as in a material organization. So we conclude there is infinite harmony in the infinite attributes of the infinite mind, but not order and arrangement of parts or organs, as in a material organization. Then the argument is worthless, for it confounds parts of a material organism with attributes of mind, and order and arrangement of parts of a material organism with harmony in the attributes of mind; and confounds an indivisible mind with an organism made up of parts. Again, there is adaptation of created organisms to certain ends, but in mind there is potency or sufficiency to certain acts. There is in the Divine being, infinite and self-existent potency or sufficiency to the work of creation, but not adaptation to the work of creation. Here again we have a confusion of terms. Adaptation of a material organism to an end is confounded with potency or power in mind to act. And the fallacy is especially gross when we remember that imparted adaptation of a created organism to the end for which it was created, is confounded with inherent and self-existent power of a self-existent mind to perform an act. Then as material organism is radically and essentially different from mind, the argument can not be applied to the infinite mind for want of analogy. Analogy, if the argument were based on analogy, would not permit us to carry the argument further than to the infinite mind, or rather it would only lead us up to the infinite mind.

But the argument is not analogical. It is purely and severely inductive. Analogy between the works of man in the marks of intelligence they display, and what we see in nature, in displaying the same characteristics, suggests the argument. The argument is strictly inductive, and analogy stops with suggesting the argument, which is based on intuitions of reason we can no more deny than we can our own existence. The premises are, that certain characteristics in man's works indicate design, contrivance and purpose. Co-ordination, adjustment and adaptation, imply design, purpose, and plan, system, method and law. No one worthy of one moment's thought dares deny this. This is an intuition of reason. The materialist dares not deny it, and can not disprove it. Design, purpose, plan, method and system, imply an intelligence that designed and planned the co-ordination, adjustment and adaptation, for some purpose or end. Method, system and law imply mind also. The materialist dares not attempt to disprove this, and dares not deny it. There is in nature, in every part, as a fundamental, a basis characteristic, co-ordination, adjustment and adaptation, into order, system, method and plan. The writings of materialists themselves, are overwhelming proof of this. This co-ordination, adjustment and adaptation into order, system, method and plan, imply design, purpose and plan, in accordance with law and system. If the materialist denies this, I will take any book written by materialists concerning the phenomena of nature, even those written to disprove teleology in nature, and I will show that they can not speak of nature, or describe its processes without expressing its teleology, ascribing to it teleology, and confessing that it is constructed on the idea of teleology. An admirable illustration of this is seen in Darwin's writings, written to disprove teleology. Design, purpose, plan, system, method and law in nature, imply mind, as the only conceivable source of this design, plan, system and law. There can be no escape from this.

The argument, then, is not analogical, but severely and purely inductive. The materialist must disprove the premises. This he can not do. Or show that the reasoning is defective—that the conclusion does not follow from the premises. This he can not do. The argument is as impregnable to his assaults, as Gibraltar to a pelting with paper wads. The attempted *reductio ad absurdum*, only reduces the one resorting to it to an absurd position, as one who utterly misapprehends what he attacks.

Again, in reply to this attempt to destroy the design argument, by reducing it to an absurdity, by extending it infinitely, and to the claim that we would be compelled to run through an endless chain of causation, or an endless series of causes and effects; we assert that to do so would be a most palpable violation of a fundamental law of our thinking, and a violation of an intuition or inherent tendency of reason, to pass out to an apprehension of the infinite, to rise to an apprehension of the absolute; and we are compelled by the same law to stop, when we reach it. As the mind stops when it reaches the absolute, it stops when it reaches infinite intelligence or absolute cause. In this infinite intelligence we have adequate cause—sufficient ground for all that exists, and we do not inquire what caused the absolute cause. We have that to which we fasten our chain of causation and stop, for reason cuts short the ratiocination of the logical understanding, and rests on the absolute cause as the summation of all causation and being. The atheist admits the absurdity of this endless chain of causation, with which he attempts to burden the theistic argument and break it down. One of the favorite devices of the atheist is to restate the theistic argument, and caricature it, and make an absurdity of it. We will relieve him of all such labor of love, and state our positions for ourselves. Another is to insist on attaching to the theistic argument some absurdity that bears some jingling analogy to it. We shall reject all such extra burdens, and reject all such old men of the sea.

The atheist, in pursuing the same line of argument in other departments of thought, repudiates, with scorn, such absurdity; and we will not allow him to load us down with what he rejects. All atheists assume the eternal, the self-existent, the independent, the uncaused, and the unconditioned in matter and force, or in a system of matter and force. He insists on rising out of a chain of derived or dependent being to the absolute and unconditioned. He says, "Out of nothing, nothing comes," hence something must have existed forever, or there must be a self-existent, unconditioned, uncaused ground for all being. In so doing he admits the absurdity of what he attempts to fasten on to the theistic argument, and refutes himself, and establishes the law of our thinking, the tendency of reason, to which we refer.

All materialists pass out into the absolute in space, duration, matter, force, and being. All others do the same, and stop with the absolute in these, as does the materialist. In obedience to the same law of mind, all but the materialist pass out to the absolute in mind, and as he stops with the absolute in space, duration, force, matter and being, so they stop with the absolute in mind. As we do not ask what bounds absolute space, or when eternity began, knowing that being absolute they have neither boundary nor beginning, so we do not ask what caused the absolute cause, knowing that being absolute he has neither cause nor condition. In all our reasonings we invariably pass from the known to the unknown, and from a comprehension of the finite to an apprehension of the infinite. Men have ever done so, in space, duration, power, being, and mind. All men accept the absolute in space, duration, power, and being. Only a few reject the absolute in mind, and they do so in violation of our nature and all consistency. If our nature be valid as a basis of reasoning, or as an instrument of reasoning, these apprehensions are verities. If we go beyond experience, to an apprehension of the absolute and unconditioned in mind, so does the materialist in space, time, and being, and power of independence and self-sustenance in matter and force. He has either to assume the eternity of matter and force and their properties, or the eternity of systems as we now see them, for he says, "'Out of nothing, nothing comes,' hence something must have ever existed." If so, it had infinite being, in infinite duration and infinite space, with infinite power of self-existence, independence, and self-sustenance, or is unconditioned and absolute. The materialist has to rise to the absolute and unconditioned himself.

In infinite space we have the macrocosm or universe. From a relative infinity of microcosms, we rise to an apprehension of the macrocosm or universe, pervaded by order throughout, uniting all into a cosmos, or infinite order or system. From finite design in each microcosm, and from a relative infinity of these microcosms, arranged into an infinite macrocosm or cosmos or universe, displaying correlated and co-ordinated design throughout, we rise to an apprehension of infinite design in an infinite universe. We have thus infinite co-ordination, adjustment, and adaptation into infinite order, system, and method, exhibiting infinite plan, design, and purpose, according to law, expressing infinite ideas of infinite reason and thought. These have a necessary ground in infinite reason. The primordial constitution of things, as we have abundantly established, compells us to place infinite mind back of and above the very first constitution of things, as the beginning and ground of all being except his own, and thus we have absolute mind as the ground and beginning of all being. Here reason rests satisfied, having found the absolute and unconditioned. It sees no reason to even think of the absolute cause as an effect. It stops in the chain of causation, having fastened it to absolute cause, the ground and summation of all causation and condition. As reason declares that eternity had no beginning, and infinite space no boundary, so it affirms that the absolute cause, absolute mind, can have no antecedent cause, but must be the basis, ground, and summation of all causation and condition, just as absolute space and time include all space and time. Reason sees nothing in the absolute cause, absolute mind, that compells it to continue the chain of reasoning, the chain of causation, further; but, on the contrary, the very constitution and law of its thinking cuts short all such attempts, and forbids it. There is but one way to evade this, and that is to deny all reasoning, all rules of reasoning, and all basis for reasoning. This the atheist does in every case, when, by inexorable reason, he is brought face to face with absolute mind or intelligent cause.

It may be asked, why does not reason stop with infinite effect or with an infinite universe, if it rests satisfied in the infinite, and will go no further? Because it is an effect, and reason affirms that every effect must have had an adequate cause, an infinite effect must have had an infinite cause, and an effect implying intelligence must have had an intelligent cause. Here reason rests, having found the absolute intelligent cause adequate to all that exists, which satisfies reason, and which reason affirms, being the ground of all causation and condition, must be uncaused and unconditioned. Infinite order, adaptation, and adjustment, in the infinite effect, imply infinite design, plan, and system, and infinite design, plan, and system imply an infinite designing mind, or absolute mind, or absolute intelligent cause. But infinite harmony in the infinite attributes of the infinite mind do not imply design and contrivance in the being of the infinite mind, for the infinite mind has one personality, and has no parts or organs, but infinite self-existent attributes in infinite and self-existent harmony and unity. It implies merely eternal, self-existent and infinite harmony in self-existent, infinite attributes of the absolute mind in whom they inhere. Infinite and self-existent harmony, in the infinite and self-existent attributes of the absolute mind, do not condition them in space, time, sequence, causation or being, for these infinite and self-existent attributes can not themselves be thus conditioned, nor can the absolute mind in whom they inhere. Then we have reached the absolute mind, the absolute being, that can not be conditioned in space, time, causation, sequence, or being, and is the ground, the beginning, the summation of all causation, condition, and being.

If it be objected that we have more in our conclusion than in our premises, we deny that such is the case. Finite design, adaptation, cause and mind, are not our premises. They are merely the occasion of our rising to an apprehension of infinite design, plan, and prescience. We have these as intuitions, and they are valid if our nature be valid, and we have a valid basis for reasoning at all. Then from infinite order, adjustment, and adaptation in the universe, which no one can deny, as our premise, we have infinite design, plan and prescience, which are equally undeniable as our second premise; and from these premises of infinite design, plan and prescience we have Infinite Mind, Absolute Cause. Our premises are infinite, our conclusion is infinite, and the objection is not valid. If it be objected that we might have a cause for each effect, and thus have an infinity of first causes for an infinity of finite effects, we reply that the unity of the effects into one system, and the unity of the causes into a system in the order that pervades the Cosmos, shows a common absolute ground in which they inhere. The generalization of all things into a Cosmos, or Universe, by the athiest, proves this. But he stops with effect. As we have seen, this effect must have had a cause, and it demands an intelligent cause, hence reason never rests until it has reached this Absolute Intelligent Cause, this idea of ideas, this ultimate ground, the summation of all causation and condition. If it be objected that we rise to the absolute by an empiricism of the finite, we reply that such is a necessary tendency and law of our thinking; and such is the course and result in all thought. From an experience, in consciousness, sensation, and reason, of the finite, variable, contingent and conditioned, we rise to an apprehension of the infinite. We pass through a relative infinity of such existences to the self-existent, necessary, absolute and unconditioned. Our experiences always necessarily lead us to an apprehension of the infinite. This is true in space, duration, causation, being and power. Materialists, as well as all others, rise out of experience to an apprehension of the infinite in space, duration, causation, being and power. All but the materialist, also, rise to an apprehension of the infinite in intelligence, or Infinite Intelligent Cause. If the validity of this regress from the finite to the infinite in causation and intelligence, or in intelligent causation, be questioned; we reply that the fact that all men do so is undeniable, and if our reason be valid as a basis of reasoning, or as a means of reasoning, it must be accepted. All men accept the validity of such regress in space, duration, being and power in matter and force, and so we affirm they must accept the validity of a precisely similar regress in intelligent causation, especially since, as we have shown, intelligent causation must be anterior to matter and force, which the athiest accepts as absolute and unconditioned in being, duration and power of self-existence, self-sustenance and independence. To the transcendentalist, who attempts to be ontological before he is empirical, or without being empirical, we say we must be empirical before we can rise to the ontological standpoint. We observe particulars, then generalize, and then rise to an apprehension of the absolute. Even then we must continually return to facts and experiences as revealed to us in consciousness and sensation, and verify our ontological affirmations by the sure test of experience and common sense. In all science, by a careful observation, collocation and study of phenomena, and comparison of characteristics, as revealed to us in experience, aided by intuitions of reason, and guided by them, we reach the great underlying principles, the great central truths on which phenomena rest, and with which we can construct a science. But we have to appeal continually to experience, and verify our elaboration and application of these principles, and their ramifications, and their accuracy. I have somewhere read of a conjurer that boasted that he could set a ladder upright in an open field, and climb to the top of it, and balance himself. Another retorted that he could do the same thing. He could do more. He could climb to the top of the ladder and *then draw up the ladder after him!* The efforts of transcendentalists are precisely like this idle boast. They attempt to climb the ladder of experience to the ontological standpoint, and then draw up the ladder after them.

If it be objected that our course of reasoning would give us only an Artificer, Lawgiver, Ruler, Judge and Executive, and not a Creator, we reply that our argument applies to the primordial constitution of things, as well as to the present order. As we have shown, the argument places mind anterior to matter and force, to give to them their very first constitution, and proves them to have been created, to have been subordinate agents, manufactured articles, the products of mind. Of late much attention has been paid to the molecular structure or constitution of matter; Loschmidt, Stoney, Thomson and Maxwell have reached ultimate molecules that are unalterable in mass, weight and properties, and that are indestructible.

The essential qualities of these molecules, and their relation to each other, prove them to be manufactured articles, and preclude the idea of their being eternal and self-existent. These properties and relations are a collocation of things which we have no trouble to conceive of as being different; hence, it is not self-existent and eternal, for it is not necessary. It is not of such a character that we can not conceive of its being otherwise than as it is and true, as is the case with all that is self-existent. Says Maxwell, in the ablest paper ever written on this subject: "They continue this day as they were created, perfect in number, and measure, and weight; and from the ineffaceable character impressed on them, we may learn that those aspirations, after accuracy in measurement, truth in statement, and justice in action, which we reckon our noblest attributes as men, are ours because they are the essential constituents of the nature of Him who in the beginning created not only the heavens and the earth, but the materials of the heavens and the earth." Then the first constitution of things proves a Creator of all things as clearly as a man's works establish his existence and agency. The line of reasoning does not end with giving us an Artificer, it as clearly gives us a Creator, and by the same reasoning. The argument applies far more forcibly to the primordial constitution of things than it does to the present constitution of things after this constitution has been given, for it is inconceivably easier to believe that the present order of matter and force produces all existences and phenomena than to conceive that blind, irrational force and matter assumed the properties and relations of the first constitution of things spontaneously.

If it be objected that the data are not the same, and that in one case we have intelligence shaping materials already existing, a common event, and in the other a creating of something out of nothing, a unique act, utterly unknown to experience, we reply that similarity of action in this respect is no part of the argument. The argument is not analogical, and hence analogy or similarity of acts is no part of the argument. The argument is strictly inductive, and based on intuitions of reason that can no more be denied than we can deny our own existence. Dissimilarity in an essential particular is freely conceded. Man shapes materials already existing. The other is a creation out of nothing previously existing. But the questions pertinent to the issue are: Are there indubitable evidences of intelligence in man's works? Are there equally indubitable evidences of intelligence in creation? Do not the same characteristics that indubitably establish an intelligent artificer in man's works, as clearly prove an intelligent creator in the first constitution of things? If the same characteristics are seen in the first constitution of things that are seen in man's work in shaping materials, do they not as clearly establish an intelligent cause for the first constitution of things, or an intelligent Creator, as they establish an intelligent artificer for man's work in shaping materials? Do certain characteristics in man's work in shaping materials prove that his works had an intelligent cause, or prove him to be an intelligent artificer or cause? Do men, when they see these characteristics in man's work, conclude that there must have been an intelligent artificer or cause of these works? Do they reason correctly? Must not they so reason? Are the same characteristics, the essential, the pervading characteristics of the first constitution of things in creation? If *they prove* an intelligent artificer or cause in shaping materials, do not they as clearly prove an intelligent cause for the first constitution of things, or an intelligent Creator? Then the fact that one is a shaping of material already existing, and the other a creation of material, makes no figure in the case. The issue is, Are the same characteristics seen pervading the first constitution of materials or creating materials, as in shaping materials? If they prove intelligence in shaping materials, do not they as clearly prove intelligence in creating materials? The argument is strictly inductive, and can not be evaded without discarding all reason and sense.

To Mill's statement that the present order of things is such as renders it probable that they have been produced by a being possessing great but limited power, and one that could not prevent certain infelicities, and could not arrange a perfect state of affairs, but merely arranged the best possible state of affairs, or who had other ideas than man's happiness that he cared more for; we reply that, as we have said, we place the Creator anterior to and above every thing as the Absolute and Unconditioned, and we have to either believe that such a being acts always for the greatest good of all and each being, and that what seems dark to us is for the good of each and all, and that the failure is in our inability, finite as we are, to grasp and understand it. Or we have to assume with Mill that such a being is unable to secure the good of each and all, or that he does not care to do so. When a man clearly grasps the idea of an Infinite Creator, Ruler and Judge, he will accept without doubt the former position, and reject the latter as blasphemy. To the objection that there is a chasm between our greatest effect and the absolute cause that we can not bridge or leap, and that we can not bring our absolute cause down to our greatest effect, or lift our greatest effect up to our absolute cause, we reply that we have passed out to an apprehension of an infinite effect, and hence there is no chasm, no lifting up or bringing down needed. There is no chasm between absolute space and relatively infinite space that needs bridging. We know that absolute space includes all space. So we know that absolute cause includes all cause, and is adequate to all effect. So long as the effect is not greater than the cause there is no difficulty. There is no difficulty in the cause being greater than the effect. We need make no attempt to lift the effect up to the cause in magnitude, nor to drag the cause down to the effect.

A very popular evasion of the idea of Absolute Intelligent Cause is the theory of nescience or ignorance. When the materialist is overwhelmed with the theistic argument, with a marvelous modesty and humility—a humility that would extremely edify were it not utter hypocrisy and a cowardly evasion of an argument he can not meet—he replies meekly that he can not comprehend the infinite. It is unknowable and even unthinkable. Hamilton and Mansell, in their mistaken zeal for religion, did just what all such exhibitions ever have done—furnished weapons to the enemy. The transcendental skeptic claimed that he could, by his own unaided reason, attain to as complete and correct an idea of God as man can grasp, hence revelation was needless. Instead of showing that man could not attain to a correct idea of God without revelation, and that he could be aided by revelation, and needed revelation as an objective standard and source of teaching, they contended that man could have no idea of God without revelation, because God was infinite, and man could have no knowledge of the infinite, not even a conception of it. The rationalist also undertook to determine *a priori* what God could do, and what he could not do, and to condemn the Scriptures for contradicting reason. The reply of Hamilton and Mansell was, that as man could not have any knowledge of the infinite, he could pass no such judgments on the Scriptures. The infinite was unknowable and even unthinkable. The skeptic stepped forward and accepted the position, and decorously bowed God out of the universe, through the back door of nescience, which these theists had opened for him, and through which they intended to drive skepticism; and then coolly shut the door in our faces, and now assures us gravely that it is unwise and unscientific to inquire what is beyond it, for, to quote Hamilton and Mansell, it is *unknowable and unthinkable*. Since man could have no knowledge of the infinite, for it was unknowable and even unthinkable, revelation was impossible, for that which was unknowable and unthinkable could not be revealed; hence man could not have any conception of God, even through revelation. He is, as Comte said, barred out of human thought as a needless, unknowable, unthinkable hypothesis.

In opposition to all this learned mist, and profound fog, let us pass in review before us a few plain facts of common sense. Man has a knowledge of space, and passes out to a relatively infinite space, and through it to a conception, an apprehension, a knowledge of absolute space, and a knowledge that space is absolutely infinite. He has a knowledge of duration, and passes out to a relatively infinite duration, and from it to an apprehension of absolutely infinite duration, and a knowledge that duration must be absolutely infinite. Man has a knowledge of force, and, from relatively infinite displays he rises to an apprehension of infinite force. Man has a knowledge of matter. The materialist affirms that matter and force must be, and are, eternal. He has the absolute and the unconditioned in space, duration, being and power in matter and force, for he declares they are eternal, self-existent, independent and self-sustaining. Spencer himself has the infinite, the absolute, the unconditioned in matter and force, in space, time, being and power, for he affirms that they are eternal, self-existent, independent and self-sustaining. He accepts these infinities. He assents to them. He reasons on them, and affirms their reality, and man's knowledge of them, and the reliability of that knowledge. He bases all his reasoning on these infinities, and thus makes man's knowledge of them the most reliable of all knowledge, and the basis of all knowledge. We affirm also that man has a knowledge of intelligence, and that he rises to an apprehension of Infinite Intelligence. As man can apprehend the infinite in space, time, being and power in matter and force, as Spencer himself affirms, so he can and does apprehend the Infinite Intelligent Cause. As he knows that there is infinity in space, time, being and power, so he knows there is infinity in mind or Infinite Absolute Intelligence, or God. As man's apprehensions of infinity in space, time, being and power are valid, and a valid basis for reasoning, so is his apprehension of Infinite Intelligence a valid basis for reasoning. Thus out of Spencer's own mouth do we establish the validity of the universal affirmation of all reason, that there is Absolute Mind. Finally, Spencer assumes the reality of what he denies, in his attempts to disprove it, and proves what he attempts to disprove. He assumes to know, and even to comprehend the infinite, the Infinite God, when he asserts that he is unknowable. How dare he assert that He is unknowable, if he does not comprehend Him? He must have an apprehension, a knowledge of the infinite, and of the Infinite God, or he could not affirm that they are unknowable and unthinkable. He assumes to know all about them, when he affirms that they are unknowable; and he thinks of them when he thinks that they are unthinkable. I once heard a pouting urchin, who was called upon to recite the alphabet, say, when the first letter was pointed out and he was asked to name it, "I don't know A, and I can not say A." "But," said the teacher, "you do know it, for you have named it, and you can say it, for you said it, while denying that you knew or could say it." But he persisted in his assertion that he did not know A, and could not say A, until the rod, that the wise man says is for the back of a fool, cured him of his stupidity. In like manner Spencer can not know the infinite, and can not think of the infinite, when he shows that he knows and thinks of it, while denying that he can. As we can not use the rod we can not cure him, as was the boy. If the teacher had not spoiled the boy's obstinacy, Spencer's followers could have have placed him alongside of "our philosopher," as Tyndall fondly calls him, and they could say "our *two* philosophers!"

Closely allied to this is the assertion that when we expand our conception of Cause and Intelligence to infinity it breaks down, passes beyond our grasp, and becomes valueless as a basis for reasoning, and in our reasoning. We reply that when we expand our conceptions of space and time to infinity they do not break down and elude our grasp, or become *valueless.* *They* do not become valueless in reasoning or as a basis of reasoning, the rationalist himself being witness. Again it is urged that we can not grasp the attributes of an infinite cause, hence a knowledge of its mere existence is valueless in our reasoning, and as a basis of reasoning. We reply that when we expand our conception of space and time to infinity, we do not change or lose our knowledge of their properties. The materialist does not in his reasonings entertain for one moment the idea that when he has expanded his conceptions of space, time, matter and force to infinity, they pass beyond his grasp and become valueless as a basis of reasoning. On the contrary, he does not use them as a basis of reasoning until he has thus expanded them. In like manner when we expand our conception of Intelligence and its attributes to infinity, we do not change their essential nature, nor lose knowledge of them. As infinite space, time, matter and force are a valid basis for our reasoning, and a valid element in it, so are God and his attributes a valid basis for, and a valid element in, all reasoning. When this idea is applied to prove that we can not join our greatest effect with our Absolute Cause, or bring down our Absolute Cause to our greatest effect, as the chasm is so wide between them, and our Absolute cause is beyond our grasp, we reply that if it is based on the theory of nescience, we have already replied to it. If it be based on a want of *nexus* of thought, we reply that the relation of causation between the cause and the effects is the connection of thought needed, and the only one needed. So also are the activity of the Creator, his agency in producing the effects, his acts, his omnipotence and his omniscience resulting from his infinity, sufficient *nexus*. Reasoning by means of the intuitions of causation, personal activity, omnipotence, government and providence, connects every effect with its cause.

Finally, when driven from every other refuge, the atheist turns at bay and exclaims: "In your argument based on reason and intuition, and especially in the design argument, you anthropomorphize God." And with a sanctimonious horror he rolls up his eyes at the thought. He is so jealous of the dignity, sanctity of the divine attributes, that he would blot them out of being before he would impair them by anthropomorphism. It is as genuine and profound as the reverence of the pirates, who captured a king's ship, and then, with their faces prostrate on the deck, made him walk the plank into the sea, because they had too profound a reverence for his majesty to dare to look on him, as they would have to do if he remained on board. So with faces prostrate in the dust of nescience, these awe-stricken atheists would make the Creator walk the plank of silence concerning his existence into the sea of oblivion, lest they anthropomorphize his attributes, by speaking of his acts, existence and presence, and by recognizing his agency in creation. It is an attempt to evade the argument by that strange spell a name, and especially a very long one. It must be a terrible thing that has such a fearful name. But let us not be frightened. Let us dare to look the bugbear in the face.

Now, we assert that anthropomorphism of a certain kind is legitimate, for there can be no conception of nature without it, and that it is correct, for the nature of things clearly establishes it. Anthropomorphism in mental attributes, moral attributes and actions is an absolute truth. Anthropomorphism, in limitations and imperfections, is incorrect, and should be most carefully avoided. Let us, then, get the argument clearly before us, and see if we anthropomorphize God in limitations and imperfections. The issue in the argument is, "Do co-ordination, adjustment and adaptation, into order, method and system, imply design, plan and purpose? Do design, plan, purpose, method and system imply intelligence?" They do, and a man bids adieu to reason, and is not worthy of one moment's further notice, who denies it. Do co-ordination, adjustment and adaptation, into order, method and system, in shaping materials, imply design, purpose and plan, in such shaping materials, and does such design, purpose and plan, prove that intelligence shaped them? A man must stultify his reason to deny it. Are there co-ordination, adjustment and adaptation into an order, method and system, in the first constitution of things, and in things as they now exist? Do this order, method and system, this co-ordination, *adaptation* and adjustment, imply design, plan, purpose and prevision and provision in the first constitution of things, and in the present order of things? Do such design, plan, purpose, prevision and provision, in accordance with law, expressing the highest conceptions of reason, imply the action of intelligence in the first constitution of things, and the present order of things? A man offers an insult to all reason who attempts to deny one of these.

We do not anthropomorphize God in this argument, for we do not assume or imply that he adjusts, designs and plans as man does. The argument does not imply similarity of method, but similarity of acts. It does not imply that there are any of the limitations or imperfections in the acts of the Creator, or any of the study, trial, failure or mistake, in his acts, that there are in man's acts. On the contrary, the very fact that the Creator is infinite, and His acts are infinite, excludes all such imperfection. All theists deny such imperfections, and are always very careful to exclude all such erroneous ideas from their argument. There is dishonesty in the persistent effort of the atheist to fasten on the theistic argument an absurdity utterly foreign to it, and that all theists repudiate.

When we affirm that infinite space and time have the same essential attributes as finite space and time, we do not limit them as finite space and time are limited. When we expand space and time to infinity, we do not change the essential attributes of space and time. We only strip them of limitation and imperfection. When we assert the same attributes of absolute space and time that are possessed by finite space and time, we do not subject them to the limitations of finite space and time. So when we affirm design, purpose and plan of the Infinite Cause, we do not, by such an act, subject the acts of the Infinite Cause to the same limitations and imperfections as are seen in similar acts of man, nor subject the Infinite Cause to the limitations and imperfections of man. We do not anthropomorphize Him in a sense that would be objectionable, or in the sense in which the objection of the atheist asserts we anthropomorphize Him. We give to Him certain attributes, and ascribe to Him certain acts, that nature positively ascribes to Him. As the very fact that we make space and time absolute, strips them of all the imperfections of finite space and time, so does the fact that we make the First Cause absolute, strip Him of all the imperfections that the atheist objects to, and renders the anthropomorphism that he objects to impossible. It leaves the attributes he has in common with man, and the identical acts of these attributes, on which the design argument is based, free from all imperfections, and all such anthropomorphizing as that on which the objection of the atheist is based. The argument is based on a similarity in kind, and not on similarity of degree. On the contrary, it asserts that there is no similarity of degree. Similarity of degree is utterly foreign to the argument. Then let the reader remember that the teleological argument does not anthropomorphize God in the sense to which the atheist objects, but, on the contrary, it denies all such anthropomorphism, and renders it impossible, except in the dishonest perversion of the argument, made by the atheist himself. The argument is not based on an assumption that the First Cause is, in imperfections and limitations, like man, but on the truth that he is an intelligence as man is an intelligence. It is based on the truth that there are evidences of the operation of intelligence in creation, as there are in man's works.

To avoid objectionable anthropomorphism, it is not necessary that we empty the First Cause of all attributes of intelligence, or of all acts of intelligence, and make him an infinite characterless unthinkable Nothing-Something, like the *nirvana* of Buddhism. Such a course is like that of the man who pulled up every thing there was in his field to get rid of the weeds, instead of pulling out the weeds and cultivating and perfecting his grain. Let us, then, recognize the attributes and acts of the Absolute Cause in his works, and divest them of all imperfections, and in so doing relegate the bugbear of the atheist, anthropomorphism, to his own misty domain of the unthinkable.

We repudiate also the assertion of Spencer and his disciples that the term God is but a hypothetical phrase representing an unknown quantity, or force, or factor, like the term X in an indeterminate equation. When the materialist passes back to matter and force, he leaves the problem stated as an indeterminate equation, and his matter and force are like the letter X in such an equation, unknown, and treating the problem, as he does, unknowable. But if we examine all the data we have in the phenomena, examine all the phenomena, and learn carefully the characteristics, we are compelled, by every principle of inductive philosophy, to ascribe the phenomena to an intelligence, an intelligent cause. We must either refuse to accept the fundamental data of the problem, or violate every principle of induction, or declare the term X to be an intelligence. Then we have to violate every principle of inductive philosophy, or from his works we must ascribe to him certain attributes of intelligence. It is an insult to common sense to say that we can not determine, from the fundamental characteristics of the phenomena that they had an intelligent cause. If I pick up a book I can tell that it had an intelligent cause, but I can not determine whether an eye or a hand had an intelligent cause. I can learn the character of Socrates, or Bacon, or Voltaire, from their works, but I can not determine the character of the cause of the universe from his works. What would we think of a philosophy that would assure us that Shakespeare or Milton were unknowable, and their works the productions of a mode of the unknowable. But infinitely worse stuff than this is now science and philosophy.

Spencer attempts to set to one side the design argument, and to illustrate its anthropomorphism, and the absurdity of its anthropomorphism by a comparison. He supposes Paley's watch to be endowed with intelligence, and to reason concerning man, its maker, as man reasons concerning his Creator, in the design argument. The watch would be totally in error to conclude that man, its maker, was a watch like itself, and man is as completely in error when he reasons, in the design argument, that his Creator is like himself. Man is no nearer the truth than the watch would be. He as erroneously anthropomorphises his Creator as the watch WATCHIZES its maker. It is a rather shrewd piece of sophistry, and there is a pert smartness of ridicule in it, but it is a most transparent fallacy.

I. His supposition is not even supposable. The act he attempts to set to one side is real and universal. The act by which he attempts to set it to one side is an absurd impossibility. Men every-where do reason about their Creator. Watches do not and can not reason about their maker. Such a conceit is madness. To use his own expression it is unthinkable, except in violation of all common sense.

II. There is no analogy in the cases. A watch, an irrational machine, is, in one case, supposed to reason about its maker. In the other, man, an intelligence, does reason about his Creator. It does not follow that because a watch, a machine incapable of reasoning concerning its maker, is not like its cause; that man, an intelligence, capable of reasoning concerning his Creator, is not like his cause.

III. "Our philosopher," as Tyndall calls him, displays a most amazing ignorance of the issue in the design argument. The issue is not similarity between the cause and the effect in any particular, but similarity between two causes, in the one essential particular of intelligence. The point in the design argument is this: Do certain characteristics of man's works prove they had an intelligent cause? Are there the same characteristics in the processes of nature? If there are, do not they establish an intelligent cause in one case just as they do in the other, and as clearly in one case as in the other? Spencer seems to think that he sets the design argument to one side when he shows that an unintelligent effect had an intelligent cause, and that there is not necessarily similarity between an effect and its cause in all particulars. But the argument is not based on an axiom, "Effects must be like their causes," but "Like effects must flow from similar causes." Again, because an unintelligent effect had an intelligent cause, it does not follow that an intelligent effect can have an unintelligent cause. An effect may be less *than* its cause, but never greater. An intelligent cause can produce an unintelligent effect, but an unintelligent cause can not produce an intelligent effect, for it can not produce what is not potentially in it.

IV. But our philosopher commits a most egregious blunder in his reasoning. He wishes to prove dissimilarity between effect and cause, and thus set to one side the design argument. We have shown that establishing dissimilarity between cause and effect does not affect the argument, for it is based not on similarity of cause and effect, but on similarity of two effects, which proves that they had similar causes. But if establishing dissimilarity between cause and effect would set to one side the design argument, Spencer has destroyed his own argument. He makes the cause and effect he uses similar in the very particular necessary to the design argument, and then bases his argument on the dissimilarity that he has himself destroyed.

V. But our philosopher most blindly yields the very point at issue. He himself removes the very dissimilarity he wishes to establish. To get up the illustration, he has to ascribe to the watch intelligence, and make it like its maker in the very particular in which he wishes to establish dissimilarity between man and his Creator. As he has to make the watch an intelligence, like its maker, to enable it to reason concerning its maker, so man, who reasons concerning his Creator, is like his Creator in this particular, intelligence.

VI. As the watch would reason correctly concerning its maker, that he was an intelligence like itself, as Spencer makes it, so man reasons correctly concerning his Creator, that he is, like himself, an intelligence.

VII. All that the watch could legitimately conclude would be that its maker was an intelligence, and like itself an intelligence, or like it in this one particular intelligence, and in the essential attributes of intelligence. That he was a watch, and in organization, and in parts, and in manner of working like itself, would be no legitimate part of the conclusion. So man legitimately reasons that his Creator is an intelligence, and like himself in this particular, intelligence, and in the essential attributes of intelligence. That the First Cause is like man in his imperfections and limitations, and that his acts are imperfect and limited as man's, is no part of the argument.

VIII. The intelligent watch would see in itself co-ordination, adjustment, adaptation, order, method, plan and system. It would, if intelligent, conclude that they imply design, purpose and plan, and that design, purpose and plan imply an intelligent cause of such design, purpose and plan. In all this it would reason correctly. So man would reason correctly when he sees co-ordination, adjustment, adaptation, order, system and plan, and design, plan and purpose in nature, and concludes that the cause of all this must be an intelligent cause. The only point at issue is, Must the cause be an intelligent cause? Spencer's illustration most clearly proves this.

IX. But we will now go a step further. In the watch—in its construction—in the ends it fulfills, there are indicated certain mental and moral characteristics of man, its maker. If intelligent, as Spencer supposes it to be, the watch would see in itself certain attributes of mind, and in its acts evidences of these attributes of mind. It could recognize in the construction of itself the same evidences of the acts and operations of mind and evidences of the same attributes of mind. It would be justified in concluding that its maker possessed the same intelligence, and attributes of intelligence, that it possessed. That its maker was a watch, or in construction like itself, or in manner of operation like itself, or limited and imperfect as itself, would be no part of the argument. The logical conclusion would include only that he was an intelligence like itself, and possessed the essential characteristics of intelligence that the watch possessed; but that its maker was a watch, or limited and imperfect like the watch, would be no part of it. So man can see certain mental attributes in himself. He sees evidences of certain mental attributes in his own actions. He sees evidences of the same attributes in nature, and evidences of the attributes of the cause of nature. He is justified in concluding that *the First* Cause has certain attributes in an infinite degree that he possesses in a finite degree. Similarity in limitation and imperfection is no part of the argument.

The anthropomorphic absurdities that Spencer attaches to the argument form no part of it. He attaches to the argument foreign absurdities of his own creation to break it down. The vital part of the argument, that the palpable evidences of design, of mind in the universe, prove the Cause to be an Intelligent Cause, and that there are seen palpable evidences that he possesses certain attributes of intelligence, such as wisdom, volition, love, plan, method and purpose, can not be denied, and these anthropomorphic absurdities form no part of the argument.

We have now followed the atheist through every evasion and objection, reviewed them, cleared the theistic argument of the absurdities that the atheist has attempted to heap upon it. We have verified and justified it, by an appeal to our intuitions, to the facts of the universe, and finally to the actions and reasonings of the atheists themselves. In our reasoning on substance, cause and being, we have reached Infinite Mind as the Absolute Cause, Absolute Substance, Absolute Being. We have verified our reasonings by an appeal to consciousness, reason and experience, as accepted by common consent of all men, and in the declarations of the atheist himself. We run to neither extreme, the extreme of nescience, with the materialist, or of transcendentalism, with the idealists in rejecting all experience. To the pantheist, we say we have more than a world soul. We intuitively characterize all acts as voluntary or involuntary. We characterize the former as good or evil, sinful or righteous, and men as sinful or righteous from their conduct. We have intuitive ideas of dependence, obligation, responsibility, accountability, and of rewards and punishments. We intuitively look on events as affecting us in accordance with these ideas. We regard the evil that we suffer from a violation of law as a punishment, and the good we enjoy from obedience as a reward. This throws them back on an Absolute Lawgiver, Ruler, Judge, and Executive as Supreme Authority. Design and moral desert in us imply free-will. Without free-will we could not design or purpose in our acts, or have moral desert in our acts or character. The same is true of the Absolute Cause. But in thinking of God as a free moral agent, a free designer and planner, possessing moral attributes, we conceive of Him as a person, and sustaining a very different relation to us from what he sustains to matter or material things.

To talk about a World Soul, an Absolute Reason, that attains to consciousness in man alone, is a monstrous absurdity and blank atheism. So also all idea of the Absolute Intelligence or Absolute Intelligent Cause, as a mere principle or bundle of principles, bound up in and subject to the eternal and necessary laws of matter, is atheism. Through all evolution, and all existence, we have, in every field of thought, passed back to our most rudimental conception of the primordial constitution of things, and shown, from the first constitution of things, that above and anterior to all matter and force, and separate and distinct from them, in essence and being, we have Mind, Absolute Mind, as the ground of all being.

We now propose to show that the atheist repudiates the clearest decisions of his own standard of authority, and commits logical suicide by rejecting his own theory. The fundamental principle of all atheistic philosophy is that we should observe and study nature in its ongoings in time-succession, as revealed in our own nature and nature at large, as apprehended by our nature, and adapt ourselves to the results of such observation and study, and accept and follow nature implicity. Then the highest authority is our nature, and the whole system is based on the reliability of our nature, and the adaptation of nature at large to our nature. Our intuitions and generalized convictions are ultimate truths, and the foundation of all reasoning. Then every part of our nature has its counterpart in nature at large.

The evolutionist teaches that every thing existing is the result of evolution under a system of all-pervading law. This law is his highest authority. The duty of man, and the highest wisdom on the part of man, is to learn the ongoings of that law, and accept them, and accommodate himself to them. Man is the highest result of that evolution and that system of law. His rational, moral and religious nature are the highest and crowning product of that system of law, and the intuitions of man's moral and religious nature are the very highest and noblest expression of this law, the atheist's own highest standard. Then by his own system, the atheist is bound to accept as the very highest standard of authority, and the ultimate test of truth, the intuitions of our moral and religious nature.

Ethnology, history, geography, observation, phrenology, and every system of mental philosophy, declare that man, all men, have veneration and spirituality. God and spiritual existences and things are the proper objects of these faculties, so emphatically declare all the above sources. God, spiritual existences and things are revealed to us by these highest elements of our nature. This intuition of God, religious worship, and spiritual life and existences, and morality is, then, a fundamental truth, the basis truth of our highest nature and all nature. This intuition has an answering counterpart in nature. There is a God: so declares the highest standard of the atheist. The atheist is the last one who should deny this universal affirmation of all reason, for it is his ultimate standard. He should accept, as the very highest authority, this intuition, this catholic affirmation of universal reason.

Man is a worshiping being. Veneration and spirituality declare him to be such, and make him such. Man, in all ages, lands, nations, conditions, races and tribes, has had, and has the idea of God and systems of worship. Man is as essentially a worshiping being, a religious being, as he is a rational or a social being. It is as natural for man to worship as it is for him to reason or associate with his fellowmen.

Late research has demonstrated that no race or tribe of men exists, or ever has existed, that has been so degraded as to have no system of religion. The Australian, the Bushman, and the Digger Indian, who have been cited as tribes destitute of all religious ideas, have been shown, by later and more careful examinations, to have systems of superstitions and ideas of future life. Indeed, such can be proved in most cases by the writers who testify that they are destitute of religious ideas. They have superstitions, the imperfect display of a religious nature. Even deaf mutes have the idea of God, caused by intuitions of dependence, infinity and causation. A most noted instance of this is the case of Steenrood, given by Alexander Campbell, in his famous debate with Owen, to prove the opposite position. He believed that the sun created all things and governed them, or he made him an intelligent cause, ruler, and God.

In times of danger and trial, when man acts instinctively and true to his nature and its intuitions, he acts as though there is a God. No man is an atheist at such times. He feels his need of God, his nature declares there is one, and he prays. Then, if the position of the atheist be true, man's desires, aspirations and intuitions have an answering counterpart in nature, and there is a God. Man's reason and his intuitions, the highest expression of the atheist's highest standard, declare there is a God. Man desires the existence of a God, and intuitively acts as though there is one. Man needs God as an object of worship, to accomplish the object of his being. He is a worshiping being. He becomes like the being he worships. His religion—his object of worship—decide for him, above all else combined, morality and duty. His reason and conscience are controlled by his religion. Religion is the regnant element in man's nature, the regulative and fundamental formative principle in life, character and conduct. Man needs religion and the worship of God as a dynamic lifting force and power in life and conduct, originating progress, starting man upward in development, sustaining and controlling him in it, and continually directing his aspirations higher. Man needs God as an object of adoration, as an object of aspiration, as a model. Man's faculties, desires, needs, intuitions, instincts and conduct, alike declare there is a God. Atheists contradict and repudiate their own ultimate standard of authority—human reason, for that has ever declared that there is a God.

Man is capable of indefinite cultivation and progress. He is elevated, by faith and devotion, to an exalted object of such feelings more than all other influences, and especially by religious faith and devotion to a pure object of worship. Religious enthusiasm has ever been the originating and animating principle, and the controlling power in all great revolutions and reformations, and all human progress. Man needs a standard of absolute authority and perfect wisdom, love, and right, to give him perfect religious faith and devotion. All this can be done only by the worship of an absolutely perfect and holy God. If our nature be reliable, there is such a being to meet this intuition and need of our nature, and holding atheists to their own standard, there is a God to meet this intuition and want of our nature. The evolutionist holds, that all that now exists is the result of a course of evolution, controlled by law, and deifies this law that has produced so consistent, exact and systematic results; and teaches that to learn this law, and implicitly accept its results as our highest standard, is the final result of all thought and science. Man is the highest product of this evolution and law of evolution. His rational, moral and religious nature, are the crowning result. The intuitions of his religious, moral and rational nature, are the highest expression of this law of evolution. All else should be interpreted by them, and in accordance with them. They, according to the atheist himself, are the very highest standard in the world. These have invariably given God, religion, worship and the catholic ideas of religion.

Quatrefages, the greatest living ethnologist, and himself a rationalist, declares that these ideas of religion and morality and future life, are man's distinctive characteristics, and that men are not atheists naturally, but in violation of nature, just as men are not suicides naturally, but in violation of nature. These great religious ideas are the crown, the ultimate of this course of evolution, and the highest declaration of that law of evolution that the atheist deifies. Then, when he rejects these ideas, he rejects his own standard, reason, for they are its highest result and regnant principle; and the highest result of the course of evolution for which he con tends, and the highest expression of the all-pervading law of evolution. If they are not true, man's nature is a cheat, evolution a monstrous fraud, and not under law at all, and this pretended law of evolution is as false as the myths of the most absurd theology. If our nature be a valid basis for reasoning, and a reliable means of reasoning, and if evolution be consistent and according to law, then these ideas are according to the law of the universe, and are its highest expression, and should be accepted as the highest standard in the universe. Then the atheist commits high treason against his own highest authority, and dethrones his own highest law.

The idea of God is in the human mind. It came by one of these sources:

I. By an immediate intuition.

II. An universal affirmation of reason, after a course of reasoning.

III. By revelation. If it came from either source, we are bound to accept its truth. If either of the first two sources gave it, the atheist is bound to accept it, or reject his own standard, human reason. Even if we admit that imagination has constructed the character of God, or man's conception of his attributes, intuition must have given the basis idea, the idea of his existence or being. From what the mind cognized in his works, from what it apprehended as the characteristics of his works, it must have also intuited the idea of each attribute, the basis or germ idea. These are simple, uncompounded, original ideas of reason. Imagination can not originate such an idea. The germ or root idea, the basis, must be furnished to imagination by consciousness, intuition, sensation or revelation. Then intuition must have given the germ, the original idea, the basis idea of God's existence, and of each attribute. Imagination, which is merely a constructive faculty, combining the materials furnished by consciousness, intuition, sensation or revelation, has played fantastic tricks with the character of God, with his attributes; but the basis idea of his being, and the basis idea of each attribute, it never gave. The absolute necessity for intelligent causation to account for the universe and its phenomena, is seen in the speculations of the atheist himself, even while attempting to destroy all such ideas, and in which he supposes he does away with such ideas. The existence of the religious element in his nature, is demonstrated by his conduct. The atheist makes a God of matter, or of matter and force. He ascribes to matter self-existence, self-sustenance, independence and eternity of being, and makes it the necessary being, and uncaused, unconditioned, and absolute in being. In so doing he ascribes to it the very attributes of God that are most difficult of conception, and the very attributes that he protests that he can not accept in the idea of God. He gives to laws of nature, or the nature of things, every attribute of the Divine being.

It is utterly impossible for the atheist to reason on the primordial constitution of things without giving to matter and force all the attributes of God, and the very ones that he objects to, and refuses to accept, and protests that he can not comprehend, or believe, in the idea of God. Not only so, but he must interpolate at every step of the path of evolution, from beginning to end, what can be attributed to mind alone. He deifies matter and force at the beginning, and continues his apotheosis until he reaches the last step in evolution, and then assumes for matter and force eternal divinity and deity, in oncoming eternity. He invariably and even unwillingly makes an intelligent cause out of matter and force. The inexorable necessity and emergencies of his reasoning compel him to do so. This is sufficient to demonstrate that we are compelled, by the very nature and constitution of our thinking, to make the ground and beginning of all being an intelligent cause, or to violate such nature and constitution by ascribing to matter and force what inhere in mind alone, and then repeat the absurdity at every step, in our course of reasoning, by interpolating intelligence until we have made a God of matter and force and of the course of evolution. Comte, and all French atheists, have exhibited the religious intuition in their lives. Comte fabricated quite an elaborate system of atheistic religious ceremonies. He emptied the sacramental cup, of the wine of the real presence, and then worshiped the cup. French atheism, in both revolutions, showed clearly the outcroppings of this ineradicable intuition. Spiritualism takes like a contagion among atheists. The Owens, Prof. Hare, and many eminent atheists, are notable examples of this. All this demonstrates that man is a religious being, has a religious element in his nature, and that he will have a religion and a God.

Two classes of persons have denied that man is constitutionally and intuitively a worshiping being, and for exactly opposite purposes. The atheist denies it to disprove the idea and the existence of God. Man, he claims, is naturally and intuitively an atheistic being, hence reason declares that there is no God. Certain theists assert that without revelation man would have no idea of God. The idea is in the world, hence God exists, and has revealed himself, and thus given rise to the idea. While intending to demonstrate the existence of God, and the necessity of revelation, and the reality of revelation, it is one of those suicidal arguments that destroys only the cause it is intended to aid. No man can take such a position and avoid being hoisted by his own petard. Had the late Alexander Campbell met in Owen a shrewd reasoner, his fundamental position would have been retorted with fatal force against the existence of spirit, the immortality of spirit, the existence of God, and against human freedom and responsibility, and all religion, worship and morality. If his position be true, all these things are myths, and utterly foreign to man's nature and reason. His brethren have accepted, and now retain, this position, because it was wielded with such effect against Owen. But some of them have learned since that when presented to other skeptics it is but a club that is wrested out of their hands, and used to beat out their own brains. The true position is, that man is constitutionally a religious, a worshiping being, and that the religious element of man's nature will necessarily exhibit itself in systems of religion and acts of worship. The Scriptures clearly so teach in Psalm xix. and Romans i. and ii., especially the twentieth verse of the first chapter. Man needs revelation to give him a correct idea of God, of his moral attributes, and of his own duty to God, to his fellow-men, and to himself. Such a position agrees with human experience, reason and revelation.

Atheists, and the class of theists just mentioned, have claimed that certain tribes were atheists, and that deaf mutes are also. The cases they bring forward are not fair tests of the capabilities of human nature. One class is the lowest and most degraded of our race, and by the same course of reasoning I can prove that the whole race is incapable of civilization. The other class is deprived of one of the principal avenues of knowledge, and of all means of acquiring moral and religious ideas from their fellow-men. But the assumption in both cases is utterly untenable. The author pledges himself to give the form of religion of every supposed atheistic tribe. Several reasons have led to such a mistake. Travelers have presented to the savages, in their queries, theological speculations, and have mistaken ignorance of their metaphysics for ignorance of all religious ideas. They have been ignorant of the language of the savages, and neither party understood the other. Lack of ceremonial forms of worship, or of prayer, or temples, or of an order of priesthood, have all led travelers to such a conclusion. In this way it has been asserted by Lubbock and others that the Digger Indians, the Australians, the Bushmen or Bechuanas of South Africa, the Arafuros of the Pacific Ocean, and certain tribes in the deserts of Arabia, are without any religious ideas or idea of God. Other and better informed writers clearly prove the contrary. The Digger Indians have idols and sacrifices, and quite an elaborate system of superstition and ideas of a future life. The Bechuanas, and every tribe of them, have ideas of a Supreme Being, and of creation, and quite extensive religious ideas. So have the Arafuros and the Bedouins of the desert of Arabia. A more unfounded assertion was never made than that man has ever been found an atheist, except a few persons in civilized countries, who reached such a conclusion by a perversion or strangulation of their nature, just as the hermit and suicide pervert or destroy their nature. Even deaf mutes have ideas of Intelligent Causation, originating in their intuitions of infinity, dependence and causation, as was clearly established by the testimony of Steenrood, used by Mr. Campbell in his debate with Owen to establish the contrary.

All intuitions are rudimental in savages and children, and they act on them before they can express them, or formulate them. Millions of men, in civilized nations, act on intuitions when they can not formulate them, but it is certainly an absurdity to deny that they have these intuitions on which they act all their lives, because they can not express them in the dialect of the schools. Among savages society is rude and tribal, or in isolated families. It is selfish, jealous and cast-like. Marriage is lust and polygamy. Self-defense is warfare, rapine and blood-shed. Love of property is robbery and violence. Religion is superstition and idolatry. Spirituality is fear, dread and superstition. But in all this error and perversion there is a substratum of truth. The basis idea, the intuition is there, and is correct and the basis of correct development. All these intuitions have proper objects, and are intuitions perverted. It is in this sense that we say that man is a social being—that he loves society, wealth, power, wife, children, country and his fellows. We say these feelings are natural to man. It is in precisely the same sense that we say that man is a religious being. Men have said that certain tribes had no idea of God, meaning that they had not a correct idea of God—had not a knowledge of the God of revelation, or of as perfect a being as He. In precisely the same way it has been said that certain tribes have no families or wives or love of children, no idea of property, no society or form of government. Yet we find in all of them, men and women associating together, fathers and mothers and children, and these living together, and personal property in dress and implements, and also leaders and association. The basis idea is there, but rude and undeveloped, and perhaps perverted, but it exists and can not be eradicated. In the same sense we say man is a religious being. He always has religious ideas, worship and superstition. The basis idea is there. If this were not the case, a revelation of *religion* would be utterly impossible. If there be in the human mind no sentiment or intuition to which revelation appeals, no foundation on which revelation is based, religion and revelation would be as impossible in man's case as in that of the brute. One of the essential and chief differences between man and the brute is that man is a worshiping, a religious being, intuitively and necessarily so. Atheism strives to remove this difference, and reduce man so much nearer the brute, from which it claims he had his origin, but the sentiment can not be eradicated. The brute is absolutely without this element in his nature, and it can not be implanted within or engrafted upon his nature, nor can he be made to display the slightest manifestation of its presence. As the atheist proves man to be an irreligious being, we can prove him to be an irrational being. Men pervert or deny the plainest decisions of reason as well as their religious nature. Then taking human nature as our standard, we must accept the idea of God as a fundamental idea of all thought.

We now propose to show that the atheist, in his reasoning on the course of development, is compelled to violate all reason and thought, and his own ultimate standard of investigation and authority; and that we are driven to the conclusion that the universe had an intelligent cause, from the infinitely greater difficulty of conceiving how the universe came into being without such a cause. The atheist has to assume the eternity of matter. In so doing he ascribes to it self-existence, independence, self-sustenance and eternity, the very attributes of Deity that are most difficult of conception, and the very attributes of Deity that the atheist protests that he can not accept or understand—of which he can not have even a conception. When we have accepted these attributes of Deity. all the rest is comparatively easy. It is infinitely the easier, and infinitely the more rational, to accept the eternity, self-existence, independence and self-sustenance of mind, that we are conscious is superior to matter, and that we see controlling matter, and using it for its own purpose, proving that matter was made for mind, and not mind for matter. If we accept the latter, an infinitely easier and more rational alternative, we have sufficient ground for all subsequent being, and all difficulty vanishes.

But when the atheist has made this assumption, he has only chaos, without law, order, property, or principle. He has to assume the eternity, independence, and self-existence and self-sustenance of the essential properties or forces of matter, attraction, adhesion, cohesion, repulsion, chemical action, affinity, and crystallization. This only gives a fortuitous concourse of atoms, a turbulent chaos. Then he has to assume that these forces were eternally spontaneously active, and assume the self-existence, eternity, independence and self-sustenance of laws for the proportion of elementary substances, their number, for chemical action and affinity, the selection of some and rejection of others, laws of proportion as to how they shall unite to form the almost infinite variety of compounds in existence, laws for change of form by heat and chemical action, laws for exact and most beautiful and wonderful geometrical forms and proportions in crystallization. In so doing, he violates every principle of reason, for reason declares that these results, in which are realized the highest conceptions of reason, can be accomplished only by the action of thinking, planning, selecting, reason or mind. Then he has to assume the eternity, self-existence, independence and self-sustenance, and the spontaneous activity of these forces, essential properties and laws, and their co-ordination and orderly arrangement and adaptation and adjustment to each other and subsequent results, in exact mathematical order and proportion, as to how, when, where, how long, how often, in what order of succession, and with what power they shall act. Again, he violates every principle of reason, for reason declares that all these results, in which are realized the very highest conceptions of reason, can only be produced by a pre-existent mind, acting on a plan, with prevision of, and provision for, coming existences and results. As we have several times shown, all these phenomena, facts, and principles, that must have entered into the very first constitution of things, the primordial constitution of matter and force, prove matter and force to be manufactured articles, subordinate agents, the products of mind. This disproves the self-existence of matter and force, and establishes the pre-existence of mind, anterior to the primordial constitution of matter and force, to give to them this first constitution.

Then he has to assume the eternity, self-existence, independence, self-sustenance and spontaneous activity of laws for the harmonious adjustment of forms, distances, and orbits of the heavenly bodies and systems, and also for the orderly arrangement of their densities, distances, motions, velocities, and relative masses, in exact mathematical proportion and law, and geometrical form, proportion and law. Either this is eternal, self-existent, independent, self-sustaining and spontaneous, or blind, irrational matter and force evolved all this. In either case, he violates every law of our thinking, for reason declares that all this, in which the highest conceptions of pure reason are realized, must be the act of reason, acting on a plan, with method, system and forethought. Notwithstanding all the infinite assumptions that we have already pointed out, we have only mineral compounds and chemical combinations. Next we have to assume the eternity, self-existence, independence, self-sustenance, and spontaneous activity of vital force, as seen in vegetable life, growth, and reproduction. It is eternal, or whence came it? No chemistry can produce it, or evolve it out of matter and force, or lay hold of it and analyze it. Also, whence came vegetable forms, types, and varieties, and their adjustments and adaptations to each other and surroundings? Reason declares that all this came from the action of a mind acting on an all-pervading, all-controlling plan, and that had prepared these forces and influences, and adjusted them and adapted them to these ends. In all these, the very highest conceptions of order, system, beauty and beneficence, the very highest conceptions of reason, are realized; and common sense utterly refuses to believe that irrational matter and force evolved all this, which has its only conceivable ground in mind. Next we have to assume the eternity, self-existence, independence, self-sustenance and spontaneity of animal life, sensation and instinct, as seen in animal life, growth, and reproduction. It have sufficient ground for all subsequent being, and all difficulty vanishes.

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The theory of the evolution of animal life, sensation and instinct, by insensate, irrational matter and force, or by chemical action, or vegetable life or organization, is utter nonsense; for if they are not inherently and eternally in matter and force, they can not be evolved out of it. The theory of the production of all varieties of animal and vegetable life, by unconscious selection is unconscious nonsense, for the term itself is a palpable contradiction, for selection can be performed only by conscious intelligence. So is the theory that animals adapted themselves to conditions. Either conditions were adapted to animals at first, or they were not. If adapted at first, then the theory of adaptation by unconscious selection is a myth, and the question arises in a moment, Who adapted them? and theism is unavoidable. If not adapted, how did they exist in unadapted conditions until adapted? This theory makes destructive agencies perform the work of constructive agencies. Common sense says all this, in which we see realized the highest conceptions of reason in co-ordination, adjustment and adaptation, into order, system, and method, exhibiting plan, design, purpose, and prevision of, and provision for, subsequent existences, in accordance with the ideas and laws of highest reason, is the work of thought, reason, mind.

Notwithstanding all the infinite assumptions we have passed through, we have no rational life, mind, or spirit. The crowning existence of the universe is wanting. The atheist has either to have mind, reason, and spirit, evolved by blind, irrational matter and force destitute of them, which violates his fundamental principle, "Out of nothing, nothing comes," or he has finally to admit the eternity, self-existence, independence and self-sustenance of life principle capable of reason, thought, and moral action; in other words, the eternity, self-existence, independence, and self-sustenance of mind or spirit in some form, the very thing he especially wishes to avoid. There is no evading the question. It is eternal, or whence came it? It is an insult to common sense to assure us that it is the blind, irrational force seen in insensate matter, modified by organization of insensate matter. Even if this were the case, whence came this wonderful organization of matter that can, as an infidel rhapsodist declares, change a cabbage into a divine tragedy of Hamlet? Naught but intelligence, infinite intelligence, can produce such a wonderful organization of insensate matter as that capable of producing such an infinite result, as such a modification of blind, irrational force would be. The atheist, in attempting to account for reason and thought, tells us that they are but different manifestations cf the same force seen in inorganic matter, changed into reason and thought by that wonderful organization of matter, our body, or its organs. When we ask, whence came so wonderful an organization of insensate, inorganic matter? he tells us that this very irrational force, that is so wonderfully modified by matter, produces the very organization that produces the wonderful modification of force. A more absurd confusion of cause and effect, and a more absurd case of arguing in a circle, was never seen. Such an utter abnegation of all sense was never before dubbed with the high sounding appellation, practical knowledge or practical science.

Let us strip the question of every evasion and subterfuge, and face the naked issue, Which is rational: to believe that this wonderful existence, human reason, mind, spirit, and the ascending scale of being beneath, which exhibits in its very primordial constitution, and at every step of the ascent, realized the most exalted conceptions of reason, are the products of mind or reason? or to believe that there is mind or reason in minerals and earths, waiting for organization of insensate matter to develop it? or to believe that insensate matter and irrational force evolve what is absolutely not in them? One of the three positions we must accept. Can we believe that reason, emotion, thought, and volition are modes of the same force as that which whirls the dust before it, or burns in the brand, or flashes in the cloud? If reason or mind was not eternally present in matter, whence came it when it does appear? Whence came the organization that develops it, or modifies the one force of nature; if it has been eternally present, and waiting for means of development, or is merely this one force modified by organization of matter? Reason declares that this development, these means of development, this organization, can only have resulted from the origination, direction, and control of a pre-existing mind, acting on a plan with this result before it as an end. Hence, after all this monstrous and contradictory assuming, to avoid accepting the existence of mind, we have to accept at last the eternity, self-existence, independence, and self-sustenance of mind, the very thing we have been trying to evade. Not only so, but we have to place mind anterior to, and above matter and force, and this course of development, by which the materialist strives to account for mind, to originate, control, and direct it, to co-ordinate, adapt, and adjust blind, irrational matter and force, and so control them as to secure this result. The materialist violates every principle of reason unless he does this, and after doing this, he commits logical suicide, by accepting at last the very thing he set out to evade—the self-existence and eternity of mind. Then, though there are mysteries connected with the thought, the only rational course is to believe the eternity and self-existence of mind, and mind alone. If we take this position, we have sufficient ground for all being, and all that exists has a rational explanation. But when we make irrational matter and force eternal, self-existent, independent, self-sustaining, and spontaneously active, and the only ground of all being and development, we begin with an assumption in violation of all reason, and we have to make assumptions of like character all along the course of development. In one case we have the inexplicable it may be, but *still it it* is perfectly rational. In the other, we have inconceivably more that is inexplicable, and the absurd contradictory and impossible.

Even when the atheist has done all this monstrous assuming he has not the present order of things, unless he assigns to mind control over matter and force, to originate, direct and regulate this almost infinite course and series of development, during the almost infinite period he claims for it. Then the provisions, ages before their existence, for coming existences, the removal of lower types and the substitution of higher, as the earth became unfitted for the lower and fitted for the higher, and the continual and connected providence demanded by the orderly development, in accordance with law, demonstrate the pre-existence of mind. So does the declaration of geology, that each species existed in its greatest perfection at the commencement of its existence, and by direct creation. There is not a particle of evidence of transitional forms, or of transmutation of species, or of bridging over the chasms between species. All talk of it is bald assumption, unsustained by a single fact. Every species produces after its kind, and has ever done so during all geologic epochs, as well as during human history. Varieties may be produced, but never a new species by mere conditions. Darwin admits that the genesis of a new species by mere matter and force, or the operation of conditions of matter and force, is unknown in human experience or knowledge; and not one particle of evidence, that such a thing has actually transpired, can be found in historic or geologic testimony. Species never hybridize; and there is not an instance can be cited of a single species that ever passed up into a higher species, in the ascending chain of being. Not a single fact adequate to a single assumption, in the atheistic theory of development, has ever been found. It is all assumption, in the face of reason, experience and possibility.

Either all life and spirit were eternally buried in matter, and existed either really or potentially in matter eternally, or they existed eternally above and distinct from matter. The latter position is theism, the former atheism. If all life was originally in a cell or germ, then all possibilities of life must have been matter, and blind, irrational force. They are not in irrational matter and force; and change matter and force as much as you can, you can not evolve out of them what was not in them, hence by evolution they can not be made to have these qualities. If all things were once potentially in irrational matter and force, there is no such thing as these qualities in the universe, for these qualities could not be there either actually or potentially. Then whence do they come, whence do they appear? There is but one alternative, and that is to deny their reality and existence, as all consistent atheists do. As these are primitive ideas of our nature, and as all primitive ideas are the basis of all reasoning and life, if these ideas are not real, our nature is false, and all search after knowledge, even the knowledge accepted by the atheist, is a chimera, and all reasoning is folly, and its conclusions the delusive phantasms of a lying, cheating nature. The atheist accepts the intuitions of absolute space and duration, and absolute being and power of independence and sustenance in matter and force, and bases all his reasoning on these intuitions. Intuition as clearly and positively gives us absolute mind, immortality and retribution, here and hereafter, and infinite, moral government. Why does the atheist reject these intuitions when he implicitly accepts the others, and basis all reasoning on them? Why accept half of what his ultimate standard, human reason, gives him, and reject the other half? Is it not because, in the former, there is no lawgiver, ruler, judge, responsibility, retribution or government, and there are in the latter? Why will the atheist accept every thing absolute and infinite in the universe, and every thing in nature except God and what is inseparably connected with that idea? Why does he stultify reason and commit logical suicide, whenever he even suspects any connection with that idea? Is it not because there is law, government and restraint in the idea? Is not the wish father to the thought, and the desire parent of the conclusion? The Psalmist uttered a profound truth when he said, "The fool has said in his heart, There is no God." Atheism is a sin of the heart and not an error of the *head*.

If the atheist accepts or claims the ideas of character and morality, good and evil, he must admit the eternal existence of mind or free personality, with freedom of volition and action. Character, morality, good and evil, can inhere only in free personality or mind, with freedom of volition and action. Then, if mind or free personality, with freedom of volition and action, is not eternal, there was a time when it did not exist, and every thing then was without moral quality or character. Matter and force, or that which has no quality or character or moral nature, alone existed. Matter and force without moral nature, quality or character, can not evolve what is not in them. Hence, if mind has not existed forever, good and evil and moral nature, quality and character, are a chimera. Atheism gives us no morality or possible basis for morality, and renders morality and character an impossibility. Such terms, if used by it, are a fraud and a cheat. If it really accepts such terms, it must accept the eternal existence of mind. We are aware that in the belief in the existence of absolute mind or personality, as the absolute cause and beginning of all being, there is the incomprehensible and the inexplicable; but there is not the absurd, contradictory and impossible. We can apprehend the existence of these things, and know that they exist, and that they do not contradict reason, that they accord with it, although we can not comprehend how they exist as they do, and why they exist as they do.

But in rushing to the opposite extreme of atheism, we have not only infinitely more of the incomprehensible and inexplicable, but we have also the absurd, the contradictory and the impossible, and at last have to repudiate reason, the only standard the atheist professes to accept. If we take as our standard our nature, our rational, moral and religious nature, with its intuitions, we must accept absolute mind as the beginning of all being, the absolute, the uncaused and unconditioned, and the ground and summation of all causation, condition and being.

We dismiss our examination of atheism with this alternative: we must either believe that matter and force, blind, insensate matter, and blind, irrational force, are eternal, self-existent, independent, self-sustaining and spontaneously active, and thus give to them all the attributes of God that are difficult of apprehension, and the very attributes that the atheist refuses to accept in the being of God, and pretends he can not even apprehend; or we must believe that mind is eternal, self-existent, independent, self-sustaining and spontaneously active. Now, we submit it to the reason and common sense of every person of sense, which is the more rational and the easier to believe: That blind, insensate matter, and blind, irrational force are eternal, self-existent, independent, self-sustaining and spontaneously active, and act in accordance with the highest ideas of reason, while utterly destitute of reason, and that all the wonderful and infinitely varied forms of existence in the universe, with all their wonderful and infinitely varied adaptations and adjustments and evidences of infinitely wise plan, law, and design, in which are realized the most exalted conceptions of reason, spring into existence without reason or intelligence, that originated and controlled this wonderful development for these infinitely wise and beneficent ends, and, above all, that mind was evolved out of matter and force, utterly devoid of all mind, reason or intelligence, and without an originator and controller of such infinitely wonderful evolution; or to believe that mind, which controls and uses matter for its own purposes, and for which matter was made and exists, and is so superior to matter, is eternal, self-existent, independent, self-sustaining and spontaneously active, and acts in accordance with law and the highest ideas of reason, and that mind originated, controlled and sustained this development, adjustment, adaptation and plan, in which are realized the most exalted conceptions of reason for these infinitely wise, beautiful and beneficent ends? If our faith be weak, why take the infinitely harder side? Why attempt to believe in utter stultification of all reason, not only the inexplicable, but the absurd, the contradictory, and the impossible?

We can not believe that matter and force are eternal, self-*existent,* independent, self-sustaining and spontaneously active; that they existed before mind and evolved it, or that they eternally co-existed with mind for these reasons:

I. Matter and physical force are inferior in being, characteristics and manifestations to mind. The evolutionist admits this when he makes mind the highest result or product of evolution and places it at the apex and above all being but itself.

II. There must be spontaneity, spontaneous activity and action in the cause of the development claimed by the evolutionist. Matter is inert and passive, and not a cause, but an instrument in the action of a cause. There is no spontaneity, no spontaneous activity in matter or mere physical force. Above all, these is no regulating or controlling power over their action in matter and force. Then neither matter nor physical force are agents or spontaneous, self-active, efficient causes. Above all, they are not self-regulating, self-controlling causes, such as must have produced this evolution.

III. Neither matter nor physical force ever act in the proper sense of the word. Matter moves when acted upon. Force is an exercise of power by an agent, and is itself an act. The only real and proper action in the universe is that of mind; and all accommodated applications of the terms action and cause, when applied to matter and physical force, can be traced back to mind as their only source, a spontaneous, self-active, efficient cause.

IV. Matter and physical force are the servants of mind. So the evolutionist admits when he makes mind the highest product of evolution and places all else below mind.

V. The primordial constitution of matter and force is such that it could not have come into being or existed at all unless mind existed anterior to such first constitution, to originate it, plan it, and give existence to it.

VI. The co-ordination, adaptation and adjustment of matter and force, of the original elements and atoms of matter, of its essential properties,of force, and its various manifestations, and their essential properties,into a system, method and plan, exhibiting design and purpose with law, expressing the highest conceptions of reason with prevision of, and provision for, all that followed, in which are realized the most exalted ideas of reason, prove matter and force to be subordinate agents, manufactured articles, the products of mind. Hence, they are not self-existent and eternal, but must have existed after the existence of mind, and have come into being by the action of mind.

VII. There must be spontaneous activity and self-regulated and self-controlled action in the first constitution of matter and force in the beginning of the course of development, and at every moment of the course of development. This is not possible in mere matter and physical force.

VIII. Matter and physical force are not sufficient ground for life, sensation, instinct, reason and moral character.

IX. If we postulate matter and force as the ground of all being, we have to foist into them all the attributes of mind, to begin with, then interpolate, at every step, additional acts of mind, and thus steal the whole of infinite, intelligent causation; and our entire progress in tracing the course of evolution is a tissue of absurdities, contradictions and impossibilities.

X. The rational, moral, and religious intuitions of our nature utterly refuse to accept matter and force as an adequate ground for all being.

We believe mind to be the only eternal and self-existent being, and that it existed anterior to matter and force, and gave existence to them for these reasons:

I. Mind is superior to matter and force. The evolutionist makes mind the highest of all existence when he makes it the highest result of evolution.

II. The power of mind over matter and force, using and controlling them and subordinating them to its uses, demonstrates that they are subordinate to mind and exist for it.

III. Mind alone is a spontaneous, self-active, self-controlling, self-regulating cause.

IV. Mind alone acts in the true sense of the word. All action in the universe can be traced to mind.

V. The primordial constitution of matter and force is such as to demand the existence of mind anterior to such first constitution to give to them this constitution and to give to them existence.

VI The primordial constitution of matter and force is such that it demonstrates that they are subordinate agents, manufactured articles, and the products of mind, and that their first constitution was given to them by mind. Hence, mind existed anterior to matter and force and brought them into being.

VII. The first constitution of matter and force, the origination, commencement, plan and control of the course of evolution, require spontaneous, self-active, self-regulated and self-controlled power. Mind is the only power of this kind in the universe.

VIII. In the first constitution of things, in every step of development, and in the present order of things, the most exalted ideas of reason are realized. Mind must have realized these ideas by its action in each case.

IX. Mind is the only cause, can be the only cause, of life, sensation, instinct, reason and moral character. Hence, mind has brought them into existence.

X. If we postulate mind as the Self-existent Being and the ground of all being, we have no further difficulty to account for all being.

XI. If we attempt to make matter and force the ground of being, we have to give them the attributes of mind, and at last place mind before them to give them being and to control them.

XII. Our rational, moral and religious nature demand such a ground of all being, and are satisfied with no other.

We will now bring forward the various theistic arguments, or lines of argument, and show that they are inter-dependent and mutually sustain and strengthen each other; and also establish, justify and perfect each one, by what we have advanced in our theistic reasonings. The defects of one can be remedied by another, and, in fact, they must be taken together to make a complete and perfect whole. They are strands of an interwoven cord, that should never be used separately, or separated in argument.

One great difficulty in theistic reasonings has been, that the various reasoners have permitted their mental biases to prejudice them in favor of one particular line of argument, and against the rest. They have vainly attempted to make of this one argument, *the one and only* argument. They have relied on it alone, and refused aid, absolutely necessary to success, from other lines of argument. Not only so, but they have attacked other lines of argument, and have thus furnished to the atheist weapons, that he has not only wielded in the interest of atheism against theism, but weapons that he has turned against themselves.

There is no such antagonism between these lines of argument, and no line of argument is complete without the others, or even possible without them. The special advocates of each line of argument generally borrow largely from the arguments they assail, and even the arguments in them that they most violently assail, and often do so in their attacks. Such a course is suicidal. All truth is harmonious and consistent, and in concord a unit. No one department of truth can say to all other departments, "I have no need of thee." Let us, then, review all these lines of argument, rounding out and perfecting each, by what can be supplied by others, and then let us weave them into a five-fold cord that can not be broken. It will give us an adequate *resume* of our course of argument.

I. The Ontological Argument.—In this argument, as in all others, we have to begin by accepting the veracity and reliability of our nature, and base our arguments on its validity in consciousness, sensation and intuition. If we can not do this, all reasoning is destroyed, and all processes and acts of reasoning are an utter impossibility. We have to assume, also, the correspondence between our subjective notions in consciousness, sensation and intuition, and the objective reality in ourselves and nature. If the subjective starting point be false, and our knowledge given in consciousness, sensation and intuition be not reliable, all objective knowledge is impossible. If the objective reality does not correspond with our subjective ideas in consciousness, sensation and intuition, all knowledge of the objective is equally impossible. We need no middle, no connecting links, between the subjective basis—ideas given in consciousness, sensation and intuition—and the objective reality.

It is time that that delusion of the mediæval schools was given to the bats and moles of the monasteries in which it had its origin. The correspondence and connection between the objective reality and the subjective ideas in consciousness, sensation and intuition is immediate and real, or all reasoning and knowledge is an impossibility and a cheat. Then the intuitions on which the ontological argument is based, can not be denied without destroying all possibility of knowledge and reasoning. They are self-evident and necessary, and they express a necessary relation between the mind and the universe.

The conclusions reached in the reasonings in the argument can not be denied by one who accepts human reason as a means of attaining truth, and as a standard and test of truth; for these conclusions are catholic and universal. We are not assuming that we must accept every vagary of the constructive faculty, the imagination, nor does our argument involve us in any such absurdity. Because reason and conscience have ever urged on the soul the idea that there is a power that punishes crime, and we urge that we should accept this intuition, it does not follow that we must accept the *Furies* of Grecian fancy.

This attempt to set to one side these catholic ideas, or overthrow their authority, is generally based on a confusion of the catholic ideas of reason with the vagaries of imagination. These fancies vary, and each man's images vary from every other man's, and there is no catholicity in them, and no authority or sanction can be based on them. But, in the idea of God, as presented in the ontological argument, there is a catholic idea of universal reason, and we must accept it or dethrone reason. In this way we always pass from necessary notion to reality—from necessary subjective notion to objective reality. All reasoners do so in all departments of thought, for in this way alone can we reason at all.

The idea of God exists as a catholic idea, an universal affirmation of reason. If the mind be a valid basis of reasoning and a reliable means of reasoning, He must exist to account for the existence of the idea as an universal affirmation of reason. The mind can not, without doing radical violence to itself and the constitution of its thinking, divest itself of the idea. It can not exist without betraying, even involuntarily, the presence and influence of the intuition. Unless we repudiate entirely our nature, we must accept it. We have the idea of an absolutely perfect being, and as reality is ever greater than mere thought, He must exist. Just as absolute space, duration and force are greater than mere thought of them, and must exist to cause the thought of them, so Absolute Perfect Being is greater than all mere thought of Him, and He exists and causes this catholic thought in universal human reason. This idea is an effect. More must exist in the cause than in the effect. The idea of the Absolute Perfect Being can not be produced in the mind by the imperfect, the finite and contingent. They may lead the mind to an apprehension of the Absolute Perfect Being, but they are not its cause. The cause must be greater than the effect. The idea of Absolute Perfect Being exists in the mind as an effect. God, then, exists as necessary to the idea as the substance to the shadow. In the generalizations by which catholic ideas are reached, there is always more in the conclusion than in the premises or the aggregate of the premises. The generalizations of the materialist, in every department of science and thought, are palpable illustrations of this. In every induction, especially in inductive generalizations, we rise above our facts and premises to the more general and complete. We combine ideas obtained from various sources into a harmonious whole, by a perception of the general thought that expresses their relation. In our generalized thoughts and conlusions we rise above our data on which they are based. If our nature be valid and reliable, these catholic ideas and intuitions must be accepted as verities, or all reasoning is impossible and a folly. Then the reasoning of De Cartes and Anselmus must be accepted as valid. Thus taking intuition as our basis, and using experience as an aid, the ontological argument can be justified and proved valid The argument from space and time as the necessary attributes of substance, establishing that substance must exist, of which they are the attributes, is a valid theistic argument, when we prove that mind is the necessary substance of which they are necessary attributes. This we can do by an appeal to other lines of argument, especially to the teleological. Thus the ontological argument is justified and established.

II. COSMOLOGICAL ARGUMENT.—All things are changing, contingent and dependent, hence there must exist an unchanging, unconditioned, independent being, in which they have their ground. Things now exist, and as nothing produces nothing, something must have always existed. We now exist, and a universe of phenomena and existence surrounds us, hence an adequate cause for us and all things must exist. God alone is the unchanging, the necessary, the unconditioned, the independent, or absolute ground of the changing, the contingent and the dependent. He alone is the sufficient reason of all existence, the adequate cause of all being. The principle of causation compells us to rise to a cause uncaused, or else all existences are effects, and we have at least one effect without a cause, a most palpable absurdity. There are two objections to the cosmological line of argument. It is objected that we pass from the concrete and caused to the absolute and uncaused. Such is the case, but it does not invalidate our reasoning or the conclusion reached. Our regress is through results progressively vast until they become relatively infinite, and in such cases reason always passes back to the absolute. All thinkers and reasoners do this in space, time, force and being. Why not also in cause and intelligence? The undeniable fact that the mind invariably and necessarily does this, is sufficient proof of its legitimacy, unless we deny the validity and reliability of our nature, and all reason. Again, it is objected that the unconditioned, the necessary, the cause reached by this line of argument, is characterless, and destitute of intelligence. The teleological argument rounds out the cosmological, and proves it, or rather Him, to be an intelligence. It will connect the *causa causans* with the first link of our chain of causes and effects. It supplies the intelligence, volition and personality needed to complete the cosmological argument, and gives us Intelligent Absolute Cause. That something must have always existed both atheist and theist agree. The design argument completes the cosmological, and proves mind to be the necessary antithesis of the existing contingent. It must be the cause of the effects and existences now in being. It is the only sufficient ground for all that exists.

In reasoning thus, we merely accept, as we must, intuitions of reason, and do not, as is sometimes objected, fall back on faith. The objection that, while claiming to establish the existence of God, this argument completes its work by relying on mere faith, which is based on the existence of God, the very thing to be proved, to do the vital part of the work, is based on a confusion of the logical understanding with reason, and a mistaking of intuition for faith. The regress to the absolute, and the affirmation that the absolute must be absolute mind, are not acts of faith, but intuitions of reason. Even if it were an act of faith, it would be valid if all men were by their nature compelled to exercise this faith. Reason ever leads us through results progressively vast, and through the relatively infinite to the absolute. It does this in space, time, force, and being—in the reasonings of the atheist as palpably as in those of the theist. The design argument proves the absolute being, the creating, ruling force, to be intelligent being or force. It completes the cosmological argument, by proving that the universe is not a ceaseless evolution of unknown forces, but that in its first constitution it was an effect of an intelligent, absolute cause. Combining these lines of argument, we have intelligent, absolute cause, if our nature be valid and reliable, if we can reason at all, or are warranted in accepting any universal affirmation of reason. It is only by the old suicidal denial of any correspondence between subjective notions in consciousness, sensation, and intuition, and objective reality, or by Hamilton's theory of nescience, pressed by the atheist to its logical result, *nihilism*, that these conclusions can be evaded.

III. The Teleological Argument.—1. We begin with man's works, and observe their characteristics. We see in them co-ordination, adjustment, adaptation, order, method, system, law, plan, design, alternativity, choice, prevision of, and provision for, ends, or purposes to be accomplished. We examine nature and the universe, and we observe in each existence and phenomenon, in each class and system, and in the universe, these characteristics; in:

a. The present order and constitution of things in each and all departments of nature and the universe.

b. We observe these characteristics in the course of evolution, as we trace it back to its beginning, in each and every step, and pervading, regulating and controlling the course of evolution as a whole.

c. In the primordial constitution of matter and force, and of the universe, and of the course of evolution, and in the absolute beginning of existence or being, we find these characteristics.

We know that in man's works they had their origin in intelligence. We know that they can have their origin only in intelligence, that intelligence alone can cause them, and their existence is impossible and unthinkable without intelligence as their only conceivable, their necessary cause. We reason that in nature and the universe, in the present order of things, in the course of evolution, and in the absolute beginning and first constitution of things, they had their origin in mind, must have had mind as their only conceivable cause. They are inconceivable and unthinkable, unless we place mind back of them as their cause, to originate them, cause them, give them being. From finite displays of reason, we pass back and out, in nature and the universe, to relatively infinite displays of reason, to absolute displays of reason, and absolute reason. A most admirable instance of this is Paley's argument on the watch, the hand, the eye, and then the human body, the world, the universe.

2. Or we commence and examine the primordial constitu-

tion of nature and the universe, then the course of evolution, then the present order of things; and we find certain characteristics in the absolute beginning, the primordial constitution of things, and in the course of evolution, in each and every step, and pervading and controlling the entire course of evolution, and in each and every existence and phenomenon in the present order of things, and in the entire universe in its present order. We find these characteristics in man's works. They are caused by intelligence in man's works. Intelligence is their only conceivable ground. They could not have been brought into being except by intelligence. Then we throw back these characteristics in the present order of things, in the course of evolution, and in the absolute beginning of things, on to intelligence as their only conceivable cause.

3. The most exalted and abstract ideas of reason, in order, law, method, plan, system, mathematics, beauty, prevision, provision, alternativity and choice, are realized:

a. In the absolute beginning and primordial constitution of things.

b. In the course of evolution, in each and every step, and pervading and controlling the whole course.

c. In the present constitution and order of things.

They are basic, originating, controlling and regulative ideas, in each case. Reason must have realized them in each case, and stood back of such realization as its source or cause. Nature can be studied, understood and construed, in each of these three cases, only in accordance with, and by means of, these ideas of reason.

Hence, in each case nature had its origin in reason, that constructed it in accordance with these ideas, and by means of them. If this were not the case we could not study, understand and construe nature, and science would be impossible. If nature have not its origin in reason there can be no science.

4. There is co-ordination, adjustment, adaptation, order, method, system, law, plan, design, prevision, provision, alternativity and choice in each existence and phenomenon, each *class of existence* and phenomena, in the universe, and per-

vading the whole universe. This is true in themselves, in their relation to each other, and to the whole universe. This was true in the absolute beginning and primordial constitution of things, in each step of the course of evolution, and the entire course, and in the present order and constitution of things. If such were not the case, matter, force, and their essential properties, and original elements, could not exist for one moment, or have came into being. They are unthinkable without them. These characteristics could not have their ground in blind, insensate matter and force. Blind, insensate irrational matter and force are unthinkable as their ground. The course of evolution is unthinkable without these ideas as originating and controlling ideas. The present order of things is also unthinkable without these ideas as controlling ideas. They have their only thinkable ground in reason or mind as their cause or source.

5. Matter, in its molecular constitution, in its primordial constitution, in regard to essential properties and original elementary substances, and force in its primordial constitution, and in its essential properties, have realized in them the ideas of reason and mind, the most exalted and abstract ideas of reason and mind, such as co-ordination, adjustment, adaptation, order, method, system, law, plan, design, prevision, provision, alternativity and choice. They could not have existed without the realization of these ideas in their existence, and the absolute beginning of their existence. They are unthinkable without such realization in their very existence, and the absolute beginning of their existence. This proves them to be subordinate agents, subordinate to mind, created articles, the creation of mind. Then mind existed anterior to matter and force, to their primordial constitution and absolute beginning, to originate them and realize in their absolute beginning, and their existence, these ideas. We can not conceive of or think of matter and force without these ideas. This places mind back of matter and force as the cause of all being.

6. Animals, such as the bee, act in accordance with the most profound rational laws, and realize in their acts the

most exalted, abstract and profound rational ideas, and work out the most profound rational problems. Such an act has not its cause in the atom of brain of the bee. It is back of the bee. It is not in blind, irrational, insensate matter and force. It must be in reason, back of the brain of the bee, and of matter and force, that implanted the instinct that accomplishes such wonderful acts of reason.

7. The most profound, exalted and abstract ideas of chemistry, and other departments of science, are realized and wrought out, and problems solved, results reached, in the actions of the most insignificant animals. The cause is not in the atom of brain of the animal. It is not in blind, irrational, insensate matter and force. It must be back of the atom of brain of the animal or insect, and of blind, insensate, irrational matter and force, in reason, that implanted the instinct that accomplishes such wonderful acts of reason.

8. The most profound scientific problems are solved, the most profound scientific ideas and laws are realized, and the most profound scientific results are accomplished, in the constitution, organization, organs and structure of animals. Take the wonderful electric apparatus of the electric eel; the chemical constitution of the poison or medicine in certain animals and plants; the adaptation of organs of birds to flight, and millions of such instances. Blind, irrational matter and force did not solve such problems of reason and accomplish and realize these profound ideas of reason. These results have their only thinkable ground in reason. Reason must have been back of matter and force realizing these ideas in such organizations of matter and force.

9. Organs of plants and animals are adapted to the organs and constitution of other animals and plants, as in the poison of the serpent and plants, in the medicine of plants, the fertilization of plants by animals. Blind matter and irrational force never did this. They are unthinkable as a cause for this. Reason, with a knowledge of the organization and constitution of each, alone could have produced such a result.

10. We find similar organs used for different ends as in the hand of man, the paddle of the whale, the wing of the bird, the flipper of a mole, etc. We find different organs used for similar ends. We see similar causes producing different effects, effects differing in certain respects, and different causes producing similar effects, and yet all maintaining a consistent, rational order, unity, harmony and system. This implies alternativity and choice, which have their only thinkable ground in mind.

11. We see prevision of, and provision for, ends yet future, and for future existences and purposes and uses, in the primordial constitution of nature, in the course of evolution, and all through nature now. This has its only thinkable ground in mind.

12. Science assures us that each new species of animals or plants suddenly appears, and in its greatest perfection at first. It reveals to us absolutely no approximating or transmutational forms. It reveals to us also certain highly organized species that appear suddenly, in their greatest perfection, without any prophetic or typical forms. This is not the result of the indefinite action of blind matter and force. They are direct creations of reason.

This argument has been attacked by the atheist, who denies all God and revelation; by the theist who wishes to make revelation the sole source of all theistic ideas and all morality; and by the advocates of the intuitional argument, who wish to make the idea of God an immediate or original conviction or intuition. With exactly opposite ends in view, these extremes meet in their attacks on the teleological argument.

The atheist, knowing well that this is *the* argument, bends all his energies to its destruction. The advocates of other lines of argument aid him, and furnish him his arguments and weapons of assault; and when he has overturned the design argument, as viewed from their standpoint, and by means of concessions and cavils that they furnish to him, he turns on them and hoists them with their own petard. Nine-tenths of all attacks on theistic proofs are directed against the design argument. "It is right to learn from the enemy."

says an old maxim. The course pursued by the atheist proves that this argument is *the* argument and the fundamental line of proof. Hence, the concessions of theists, now so often made, that this argument is not valid, and their attacks on it, are a betrayal of the citadel of truth into the hands of its enemies by those who should be its garrison.

The atheist knows very well that but comparatively few persons are reached by the ontological or cosmological lines of argument. He knows that personality and character, the things he dislikes and dreads in the idea of God, can be imparted to the being demonstrated by them by the design argument alone. He knows that the advocates of the intuitional argument obtain the intuitions they use from the design argument, and that they would not have the idea of intelligence and personality in the being they claim to reach by intuition, without the ideas of intelligence furnished by the design argument. Indeed, reason would never reach the intuitions of intelligence and personality in the absolute being without the design argument.

The atheist well knows that he can make a characterless abstraction of the being of all other lines of argument, unless the design argument gives to him intelligence, character and personality. As these attributes alone make Him a lawgiver, ruler and judge, the very characteristics that the atheist dreads and dislikes, he bends his entire energies to the destruction of this argument. He uses the positions and concessions of theists in their attacks on the design argument, and then brains them with their own club.

It is objected that the argument is analogical merely, and not demonstrative. It is not analogical, but strictly inductive. Analogy suggested the argument, it is true, but the argument itself is strictly inductive, and based on observations and intuitions we can no more deny than we can our own existence. The objector must either disprove the phenomena, or show that they have not the characteristics that the argument ascribes to them, or show that the intuitions on which the argument is based are not intuitions and valid, or show that the process of reasoning is fallacious. Bestowing a weakening epithet on the argument does not set it to one side.

It is objected that we have more in our conclusion than we had in our premises. We reply that all men pass through the relatively infinite to the absolute in space, duration, force and being. So we can and must in causation and intelligence. From finite co-ordination, adaptation, adjustment, order, plan and forethought in man's works, we pass through the same characteristics in nature, through characteristics progressively vast, until they become relatively infinite, until we rise to infinite co-ordination, adjustment, adaptation, order, plan, and forethought in the infinite universe. Intuition compells us to throw these back on Absolute Mind, as their only conceivable ground. Our premises are infinite co-ordination, adjustment, adaptation, order, system and method, then infinite design, plan, law and forethought, and our conclusion is Infinite Mind. The argument is as severely inductive as it can be made, and as any argument can be.

It is objected that in man's works we have intelligence and volition, using forces already existing, but in the design argument we have a creation of forces and materials, hence the argument is worthless for want of analogy or similarity. But it is not in the slightest degree essential that the acts be similar in this particular. Similarity in this particular has nothing to do with the argument, for it is not based on, nor is it in the least affected by it.

We recognize design, plan and forethought in man's works, in using the forces and materials of nature. This is based on certain characteristics of the works, that are not affected by the fact whether it is using materials or creating them. In the primordial constitution of things, we see design, plan and forethought. In the very first constitution of nature, in the original co-ordination, adjustment and adaptation of things into order, system, method and law, intuition compels us to recognize plan, design and forethought, and ascribe them to intelligence. As we are compelled by intuition to ascribe one to intelligence, so we are compelled to ascribe the other; and the act itself has nothing to do with the argument. The question is, What are the characteristics of the acts? If they are the same, the characteristics of the causes or agents must have been the same. It is objected that man would run through an endless chain of causes and effects, and never rise to an Absolute Cause. The objection forgets man's work in generalizing and passing back to the beginning of things. Geology proves nature to be a development, a progression. If so, it must have had a beginning. This leads man back to the beginning of things. He finds design, plan and forethought in the primordial constitution, or very inception of things. Intuition compels him to ascribe this to Absolute Mind. There is only one escape.—Either deny that man can and must intuit design, plan and forethought in nature, and in the primordial constitution of things. If one does this, he bids adieu to common sense, and, if a scientist, contradicts his own description of nature. Or deny that design, plan and forethought imply intelligence. If one does this he is worthy of no further notice.

The present order of things can not be eternal, for it is a progression and must have had a beginning. The things of which it is composed are finite, changing and perishable, and can not be eternal, self-existent, independent, self-sustaining and self-controlling and self-regulating. The contrasts between using nature and the creation of nature, do not prevent our recognizing design, plan and forethought in the first constitution of nature, and the present order of nature and the universe. On the undeniable fact, that reason recognizes design, plan and forethought in the original constitution of the universe and nature, and in the present order of the universe and nature, the whole argument depends. Nor is it necessary to the argument that we comprehend nature. We admit that we merely apprehend much on which the argument is based. To object to the argument, however, because we do not comprehend all on which it is based, is to apply the fatal fallacy of nescience, which completely destroys all possibility of knowledge. We merely apprehend infinite space, duration, force and being, and yet all use them as a valid basis for reasoning, and we are compelled to use them as such. We rise above a phenomenal cause, either physical or spiritual. When reason recognizes plan, forethought and design, it intuitively concludes that a personal intelligent cause must have been their source. Reason intuitively recognizes these characteristics in the first constitution of things. This proves that the first constitution of things, the first phenomenon, had a Personal Intelligent Cause, above and back of all phenomena. We complete the work of the logical understanding, by an intuition of reason, in causation and intelligence, as we do in every thing else. The Absolute Personal Cause can not be proved to be an effect, by an extension of the design argument. We have already shown that we have no analogy to lead the argument further, and that we violate all analogy and the fundamental principle of reasoning when we do so. Reason always stops and rests in the absolute. It rests in the Absolute Mind, as the Absolute Uncaused and Unconditioned, and the summation of all causation and condition.

The objection that, because there is evil in the universe, we must give to the Deity a mixed character, applies to all theistic arguments,—to one as much as the other. Notwithstanding the mystery of evil, reason must believe that the good of being, considered in relation to the entire universe, is the end of existences and phenomena, and is secured in the infinite plan. We have either to take this alternative, which leaves the mystery inexplicable, or to take the other alternative, which leaves the mystery of evil as inexplicable; and, by plunging into atheism, launches out on a boundless sea of the absurd, the contradictory and the impossible. Our conception of design does not break down when we expand it to infinity, any more than our conceptions of space, duration, force or being break down when we expand them to infinity. It is as valid in the infinite universe as in the limited area of human experience. Law, plan, design and forethought can be apprehended as infinite, as well as space, time, force or being. Reason throws them back on Infinite Reason, as the Absolute Cause. We can know the characteristics or attributes of this Absolute Cause by His acts, just as we know the characteristics of men by their acts. Absolute knowledge is not necessary, for we do not have that concerning our fellow-man, or even ourselves. From the finite we can rise to an apprehension of the infinite in character, as well as in space, duration, force and being. The objections urged by the advocates of the intuitional argument against the teleological, destroy their own argument. Man would never have the intuitions that they use in their argument without the teleological argument, or the catholic ideas it evolves and uses. To set to one side the teleological argument, they have to deny the reliability of our nature in its intuitions, which destroys their own method of proof.

When we reach the Absolute Mind, reason places Him above and back of nature and all being but Himself. We have shown that matter and force are subordinate agents, manufactured articles, the products of mind; hence reason places Mind anterior to the primordial constitution of matter and force, to give to them this constitution, or to create them; and thus makes Mind the beginning of all being, the Absolute Cause. The operations of the Life Principle that we see in nature, prove it to be an intelligent life principle. This is the province of the design argument. Reason places it above nature, controlling it, and anterior to nature, giving to nature its first constitution, or creating it. We know that design, plan and forethought, in our own works, are the product of our own intelligent volitional constructive personality,—we trace them to it as a cause. So we trace the plan, design and forethought that we intuitively and necessarily recognize in the first constitution of things, to the intelligent, rational, constructive personality of an Intelligent Cause. Geology proves the universe to be a progression, and that it had a beginning; and reason places Mind anterior to that beginning, as a Beginner or Cause. We have already shown that we can not press the design argument farther. We can not refuse to accept our interpretation of nature, for it is catholic and universal. It is an affirmation of universal reason; and to deny it would be to destroy our intuition and all reasoning. If we can not accept the design argument, or the intuitions on which it is based, or the affirmation of universal reason used in it, we can not accept the intuitional argument, nor, indeed, can we accept any reasoning whatever, on this or any other topic. The advocate of the intuitional argument claims that he has the idea of God as an original conviction of the mind, an immediate intuition. It is not, for it admits of proof, and the advocates of it do not use it as an immediate intuition. But even if it were, if we can not trust our nature in the intuitions on which the teleological argument is based, how can we trust it in this intuition? In precisely the same way we can deny all catholic ideas, and destroy all knowledge and possibility of knowledge.

The teleological argument alone will make the First Cause an intelligence. The teleological argument, using intuition, recognizes indices of mind in nature and the universe, and the intuitional argument completes the work, by throwing them back on mind as their only conceivable ground. We do not, however, intuit the Deity as an immediate intuition.

If we did, it would need no more proof than an axiom, but the advocates of the intuitional method of proof admit that it can be sustained by proof, and resort to argument to establish it, thus showing that it needs proof, and is not an immediate intuition. Nor do we intuit the Deity independent of the occasions furnished by the senses, which are used in the teleological argument. It is only by means of the phenomena and series of phenomena, that we use in the teleological argument, that we rise to the apprehension of God as a catholic idea, or universal affirmation of reason. The savage does not intuit the Deity independent of the phenomena of nature, or as an immediate intuition. His sense of dependence and his intuitions of infinity and causation, and the traces of mind that he sees in the phenomena around him, united with his religious sentiment, lead him to attribute these phenomena to a deity. Because man ever does this, we must accept it as a valid intuition, or reject reason. The poet does not intuit deity as an immediate intuition, but from other intuitions, by means of precisely the reasoning pursued in the teleological arguments, he reaches the idea as an intuition by generalization, or as a catholic idea. He force can not have these characteristics. They can not give rise to them. They can not be conceived of, as having them or giving rise to them. If there ever was a time when only blind, irrational matter and force existed, these characteristics, and what alone can possess them, did not exist. Nothing existed that could by any means give rise or existence to them, or what can alone possess them. These characteristics and that which possesses them do exist. Hence, there never was a time when mere matter and force alone existed. Mind, spirit, personality, which possess these characteristics, must have existed forever, or be self-existent, independent and self-sustaining. Again, man has the idea of right and wrong, good and evil, moral desert, responsibility, obligation and retribution. These all point to a Lawgiver, Ruler, Judge and Executive to which these ideas refer, and in whom they have their ground and counterpart. Unless our nature be a cheat, and the universe a delusive fraud, there is a Lawgiver, Ruler and Judge to which they refer. The careful study of human conduct and its results in individuals and nations, in the philosophy of history, establishes the correctness of this catholic idea of reason. The alternativity and suspense of results that there is in the moral world, shows that there is freedom, choice, voluntary action, responsibility and probation. It also throws us forward into the future world where all this will be adjusted by a Supreme Ruler, Judge and Executive.

V. INTUITIONAL ARGUMENT.—Man has veneration and spirituality or a religious element in his nature. It will have its expression or outcroppings. Man intuitively has aspirations toward, and desire for, a superior being. Has an intuitive tendency to worship, to recognize the existence of a being above himself. So declares all mental science. No man or set of men in geography or history have ever existed that did not have superstition or manifestations of this religious element, and recognitions of superior beings. The lowest savages, the Veddas of Ceylon, and the deaf mute, have this intuition. There may be error and imperfection, but the idea in embryo is there. Then man is as essentially a religious being as he is a social being. The atheist perverts and vioalways presents his thought teleologically. To sustain the intuitional argument, we have to assume the validity and reliability of our nature in its intuitions, and the reliability of a regressive leap from our finite mind to the infinite, and the reliability of our nature in the intuition thus reached. The same necessary and fundamental assumption renders valid the teleological argument, and removes every objection against it. The soul does not rise to God in one intuition, or one act in intuition. It reaches the idea by the teleological course. The intuitional argument has to commence with our volitional energy as a starting point, as its first conception of intelligence and cause, and it reaches the idea of God as a generalized conclusion.

It is objected that in the teleological argument, man projects himself into nature, and worships his own image. He makes God in his own image. Man projects himself into nature as much in the intuitional argument as in the teleological, for his own intelligence gives him the idea of infinite intelligence, and his own attributes give the basis for every attribute of infinite intelligence. But we do not project ourselves into nature in either argument. If I recognize in another man's works traces of the same characteristics that I possess, and reason that their author must have the same attributes that I have, I do not project myself into the other man's works. In like manner, when I recognize in my works certain characteristics and evidences of intelligence, and recognize in nature the same characteristics and traces of intelligence, I do not project myself into nature, when I conclude that it had an intelligent cause, and one possessing, in infinite perfection, what I possess imperfectly, and in a finite degree. Thus we justify the teleological argument, and place it on a basis that can not be denied without denying reason.

IV. THE ETHICAL ARGUMENT.—There are in the world ideas of good and evil, sin and righteousness in conduct, moral desert, character, responsibility and retribution. These things exist and are realities, or our nature and reason are cheats, and all knowledge a delusion. These ideas attach to *mind, spirit,* personality alone. Blind, irrational matter and force can not have these characteristics. They can not give rise to them. They can not be conceived of, as having them or giving rise to them. If there ever was a time when only blind, irrational matter and force existed, these characteristics, and what alone can possess them, did not exist. Nothing existed that could by any means give rise or existence to them, or what can alone possess them. These characteristics and that which possesses them do exist. Hence, there never was a time when mere matter and force alone existed. Mind, spirit, personality, which possess these characteristics, must have existed forever, or be self-existent, independent and self-sustaining. Again, man has the idea of right and wrong, good and evil, moral desert, responsibility, obligation and retribution. These all point to a Lawgiver, Ruler, Judge and Executive to which these ideas refer, and in whom they have their ground and counterpart. Unless our nature be a cheat, and the universe a delusive fraud, there is a Lawgiver, Ruler and Judge to which they refer. The careful study of human conduct and its results in individuals and nations, in the philosophy of history, establishes the correctness of this catholic idea of reason. The alternativity and suspense of results that there is in the moral world, shows that there is freedom, choice, voluntary action, responsibility and probation. It also throws us forward into the future world where all this will be adjusted by a Supreme Ruler, Judge and Executive.

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VI. The historic consensus of all religions and moralities, all human speculations, experience and history, is a powerful auxiliary argument. The consensus of the course of historic development, claimed by the atheist, should be accepted by him. It does not end in atheism, as he asserts, but in theism.

VII. Archaic researches into early history and religion, and professed revelation in the Scriptures, are a strong argument when elaborated.

VIII. And we call particular attention of the atheist to this. All things are the product of an orderly system of evolution, in accordance with law, and a consistent system of evolution. Our highest achievement is to study this evolution, and learn and accept its results. This is practical, true science. So says the atheist. Man is the highest product of evolution. His mental nature, including the moral and religious, is the apex of evolution. The idea of God, and these catholic religious ideas, are the crowning product of evolution. If true to his own standard, the atheist must accept them. If this course of evolution be not a cheat and a mockery, this crowning product must be true. All this evolution is controlled by law. The idea of God is the highest expression of this law of evolution, the supreme law of the atheist. If loyal to this law, he must accept it. Why does not the atheist accept the universal voice of human reason, that he pretends to take as his standard? Why does he reject the highest product of that evolution he professes to accept as real science? Why does he reject the highest expression of that law of evolution he professes to accept as his supreme law and standard?

Then, as a summary of these lines of argument, we conclude that the ontological argument gives us the idea af absolute and necessary and all-perfect being. The cosmological argument gives us the absolute cause, the necessary being, the unconditioned, the self-existent being. The teleological argument makes the absolute being, the all-perfect being, the necessary being, the unconditioned, the self-existent being, the absolute cause, of the ontological and cosmological arguments, an intelligence. The ethical argument proves that he is Supreme Lawgiver, Ruler, Judge, and Executive. The teleological argument gives to him moral attributes also. The intuitional argument furnishes to the ontological and cosmological arguments the intuitions of the absolute, the necessary, and the unconditioned, and the intuition of causation. It furnishes to the teleological argument the intuitions on which it is based. It makes the intelligent, moral being or person of the teleological and ethical arguments an absolute being or person. Thus all the lines of argument are interwoven and interdependent. Taken together, they fasten the universe to the throne of the Eternal One, who inhabiteth eternity, by a five-fold chain that can no more be broken than the omnipotence of him whose existence they demonstrate. We will now close by applying to atheism and theism the test of all inductive reasoning.

I. That which is appealed to as the cause of the phenomena or existences is known to exist.

II. It is known to produce phenomena similar to those ascribed to it in the explanation or theory.

III. It is adequate to cause all the phenomena ascribed to it in the explanation or theory.

IV. There is an obvious relation or connection between the powers of the cause and the phenomena that are claimed to be its effects.

1. Most of what the atheist, in his speculations, presents as causes of the phenomena of nature, do not exist, have never existed in human experience, and we have absolutely no evidence that they ever did exist.

2. Those things he appeals to as causes of the phenomena of nature, that now exist, have never in human knowledge been known, in a single instance, to produce any such phenomena. Indeed, in most cases, they would prevent the production of such phenomena, or destroy the phenomena, if brought in contact with them after they had been produced by an adequate cause.

3. Not only do they now fail to produce such phenomena, but they have not a single element of causal efficiency in them, adequate to the production of such phenomena. There is absolutely no relation or connection between the powers of what atheism claims to be the cause of the phĕnomena of nature, and the phenomena of nature which it claims to be their effects. Not only so, but there is an absolute incompatibility and repugnance often, that would render what it appeals to as a cause a destructive agency, instead of a constructive power or cause.

Let us now test theism:

1. The cause to which it ascribes the phenomena of nature, intelligent, rational, personal energy, is known to exist. Indeed, it is the only spontaneous, self-active cause, the only agent, the only power that really acts, of which we have any knowledge. The phenomena demand such a cause, and absolutely can be produced by no other.

2. It produces precisely such phenomena as we ascribe to it in the theistic solution. Indeed, all the phenomena of that character, of which we have any knowledge, are produced by such a cause.

3. The cause is adequate to the production of the phenom-

ena, and it is the only existence that is adequate to the production of the phenomena. It is the only cause that our rational nature will accept, and when applied to the universe it is the only cause our rational, moral and religious nature will accept.

4. There is an obvious and necessary relation between the phenomena of nature, that are regarded as effects, and the powers of that which is regarded as cause, that is as palpable as intuition, that is self-evident, and constitutes it the only possible cause. With this, we leave the discussion of the theistic solution with the reader. If he will not obliterate the image of God in the soul, or shut the eye of reason to this light that lighteth the world; but with his path illuminated by it, if he will go forth in the prosecution of this line of argument, all the universe will be filled with the resplendent glory of the Presence, before whom all intelligences should bow, exclaiming "My Lord, and my God." But, if he extinguish this light, or shut the eye of reason to it; as the bird of night can fly toward the sun and hoot "No light," or the blind man can stand with the rays of the sun pouring into his sightless eyeballs, and cry "There is no sun," so the atheist can gaze on the dazzling throne of Jehovah, and verify the words of the psalmist: "The fool hath said in his heart, There is no God."

CHAPTER VII.

Scientific Progress and the Cardinal Ideas of Religion.

We have now accomplished the work we proposed when we commenced this book, but there are two questions so closely connected with what we have written, that, at the urgent request of many persons, and especially those who urged the publication of the book, we will devote a brief space to their consideration. "Does the theory of evolution, or any theory or speculation of science, afford a sufficient ground to warrant the abandonment of the cardinal ideas of Christianity?" The second is, "Is the permanence of Christianity, as a universal religion, incompatible with the idea and course of evolution, development and progress, established by modern science?" We shall devote a chapter to each, although it would require a volume to do justice to either.

The tendency of scientific research has been to trace all phenomena to natural causes, and to bring all causes and phenomena under the control of established laws, always acting uniformly. Man did not do so at first. He began in a state of child-like ignorance and simplicity. The race has had a growth analogous to the growth of the individual. The child begins by noticing the occurrence of phenomena around him. He is conscious of intelligent causation in himself. Almost the first things he notices are the results of intelligent causation in others. One of the first intuitions of the child is that of intelligent causation in himself and those around him. His first intuition of causation has its origin in consciousness of his own volitional energy, as a cause in action producing his acts. The first occurrences he observes are the acts of others. He soon, and, indeed, immediately and intuitively, attributes these acts to them as causes, as he knows he is a cause of his own acts. He sees occurrences produced by other objects than persons. He traces them to these objects as their cause. He attributes intelligence to the causes. There are characteristics in the occurrences that ally them to his own acts. Hence, the child, at first, attributes every occurrence to the immediate action and energy of intelligence, and he attributes intelligence to every thing. He soon learns, however, to operate through second causes. He soon learns that these second or instrumental causes are not personal, efficient causes. He learns to recognize second causes in nature, and learns that these second causes in nature are not personal, intelligent causes.

The same thing has happened in the progress of the race. At first man attributed all phenomena of nature, at least all that he could not understand, to the immediate action and energy of intelligences, God or gods, or subordinate spirits—supernatural agencies. He learned to recognize second causes in nature. He continued to observe and generalize until he has risen to the conception of universal matter and universal force, and the unity of matter and force, and the unity of the phenomena of matter and force, into a system in the universe. Here the materialist stops. He claims that investigation has removed one class of phenomena after another from under the supposed control and agency of mind, and has substituted the universal and uniform agency of matter and force, and has led us up to matter and force, acting uniformly, until we are warranted in assuming that all phenomena are the results of universal matter and physical force. He assumes that science has demonstrated that mind or spirit has no existence, or that there are no such entities entirely separate and distinct from matter and physical force.

Mind is either a function of matter, or it is essentially the one force pervading all nature, modified by the organization of matter, through which it is displayed; or, in other words, mind is merely a different manifestation of the one physical force, modified by that organization of matter, known as our body. He denies intelligent causation in the phenomena of nature and the universe. Indeed, he denies all causation. But he especially denies that mind force, or intelligent causation, existed above and anterior to all matter and physical force, and before all phenomena, and created matter and force, and gave to them their essential properties, and co-ordinated and adjusted them to produce phenomena, and regulated, controlled them in producing phenomena. He denies that the only efficient cause in the universe is mind, and that the source of all force and cause is mind. He denies that mind force was above and anterior to all other existence, and that it is potentially and efficiently present in all phenomena, as the efficient cause, and the originating, ruling and controlling power and energy. Of course he denies all the cardinal ideas of all religion and of Christianity.

These cardinal ideas are:

I. God, or the Self-existent, Absolute Mind or Spirit.

II. The creation of all things by Him.

III. Personal, efficient and active control of all His works and all things by Him.

IV. Spiritual existences, or spirit in man, and also higher spirits or intelligences.

V. Responsibility and accountability of man and all intelligences to God as ruler and judge.

VI. If consistent, he denies such a distinction between things as good and evil, and between acts as voluntary and involuntary, and between the former class of acts as right and wrong, and the existence of such attributes of character as righteous and wicked, and of such categories as vice and virtue. He denies all moral distinction between existences, acts and characters.

VII. He must also deny all moral desert in act or character.

VIII. He denies all retribution, or punishment and reward for conduct or character, by God as ruler and judge.

IX. Providence, or care and protection exercised by God over His creatures and works.

X. Prayer to God by intelligences, and answer to such prayer by Him in His providence.

XI. Revelation, or an impartation on the part of God of truth, as a standard of truth, conduct and objective teaching.

XII. Inspiration of chosen men as a means of revelation.

XIII. Miracle as an evidence of inspiration and revelation, and as a sanction to them, and as a means of cultivating religious nature and sentiment.

XIV. Prophecy as a means of preparation for future events, and as a species of miracle.

XV. Sacrifice as an expiation for sin, as a means of propitiation, as a confession of sin and guilt, and as an expression of thankfulness.

XVI. Expiation and atonement by a superior being.

XVII. Mediation between God and man, usually by one superior to the worshiper.

XVIII. A personal object of faith, gratitude, love and devotion in religion.

XIX. A personal embodiment of doctrine and life in religion.

XX. A personal leader and guide and ruler in religion.

XXI. Incarnation, or a manifestation of divinity in human form, as leader, personal embodiment of doctrine and life, and as object of devotion, faith and love, and as atonement and mediator.

XXII. Forgiveness of sin, by and through atonement and mediation, on reformation of life.

XXIII. A system of religion, embodying the above cardinal ideas, and based on them, with dogma, worship and discipline.

XXIV. A suitable organization, with officers and ordinances.

The materialist claims that the results of modern science warrant our rejecting all these cardinal ideas of religion.

Before we yield these universal affirmations of man's rational, moral, and religious nature, at the demand of the atheist, he will have to settle in such a way that there can be no doubt about it several fundamental queries:

I. Is the distinction intuitively made by all men between mind, and matter and physical force, valid? Or does science give us sufficient grounds for rejecting it? As this distinction is a necessary intuition of every mind, capable of the simplest thinking, we must have proof that does not admit of a possibility of a doubt before we can be asked to reject it.

II. Is it true that all force is identical, and that all that have heretofore been regarded as distinct and even antagonistic forces, are only different manifestations of one all-pervading force, and the difference in the displays of force is occasioned by the difference in the organization of the matter through which it is manifested? Is there not a radical and essential difference between mind, or mind force, and physical force? We must have more than the jingling analogies of the new assumption called the correlation of forces. Their characteristics are radically different. Inductive reasoning would trace the phenomena to radically different causes. Physical force and mind force are not convertible, but antagonistic and destructive of each other.

III. Are there not two domains of being and phenomena that are radically and essentially different and distinct—matter and physical force, and mind; or material and physical existence and phenomena on the one side, and mental, or spiritual existence and phenomena, on the other?

IV. Is the theory of atheistic evolution, on which the rejection of these cardinal ideas of religion is based, true? It must be demonstrated beyond a doubt, before we can be asked to abandon these fundamental intuitions of our nature on its account. To ask us to do so now, while it is a mere speculation or guess, is an insult to common sense.

V. If it be demonstrated that the present order of things be the result of a course of evolution, development, and progress; is the course of evolution, development, and progress such as to demand or warrant our abandoning these cardinal ideas? Is it not in strict accordance with them? Nay! does it not teach them, and demand them to account for it?

VI. Must not mind have existed anterior to the primordial constitution of matter and force, and all things except itself, to give to them their very first constitution, or to have created them?

VII. Must not mind have been the spontaneous, efficient, and controlling cause and energy of the course of evolution, development, and progress claimed by the atheist?

VIII. Must not mind be the spontaneous, efficient, controlling cause and energy in the present order of things?

IX. The initial question is; Is the intuitive division of phenomena into two classes—physical or material, and mental or spiritual, that is instinctively and necessarily made by every mind capable of the simplest thought, valid? Does a careful examination of their characteristics and nature warrant such a distinction? Are they radically and essentially different and distinct? If we settle this in the affirmative, as we must, then we must trace them to radically different and distinct causes. We must admit that they have radically different and distinct causes.

X. The next fundamental question is: Is there in man a conscious, rational, spontaneous, self-active entity, or substantive agent, called mind or spirit, separate and distinct from matter and physical force?

XI. Another important question is: Is there any spontaneous, self-acting, causal efficiency or energy in matter or physical force? Are either matter or physical force ever agents, spontaneous, self-acting agents? Is not matter inert and passive? Is not physical force merely an exhibition or act of mind? Is there any spontaneous, self-acting, self-regulating, self-controlling, causal efficiency, or energy in blind, irrational, physical force?

XII. Then arises the question of questions; Must not all existence and phenomena in the universe be attributed to mind or God?

XIII. If there be a God, are not the ideas of creation, government, retribution, revelation, atonement, and religion a necessity?

XIV. If there be a spirit in man and a God, are not the ideas of good and evil, right and wrong, freedom of volition, vice and virtue, righteousness and wickedness, moral desert, reward and punishment, responsibility, accountability, inspiration, providence, prayer, miracle, sacrifice, forgiveness, incarnation, and religion a necessity? Suppose it be proved that all of the present order of things is the result of development, evolution, and progression, would it demand that we abandon these cardinal ideas of religion, or does it not merely demand that we modify and correct them, and leave them intact, and even exalt and enlarge them, and our conceptions of them?

In brief, the materialist must show that the distinction intuitively and invariably made between mind, mind force or spirit, and matter and physical force, and between phenomena as attributable to mind or intelligent causation, and as attributable to matter and physical force, is untenable and groundless. He must show that mind, mental action, mind force, is but a different manifestation of physical force, and that the difference is occasioned by the difference in the organization of the matter, through which it is displayed. He must *prove*, beyond the possibility of doubt, his position, so diametrically opposed to all intuition of every mind capable of the simplest thought, all root ideas of all languages, all fundamental ideas of law, society, morality, human action, and all reasoning, and not assume it, or ask us to accept it as a mere guess or speculation, and act on it in opposition to all intuition. Nor will certain plausible analogies be sufficient. It must be demonstrated beyond a doubt. He must show beyond a possibility of doubt that human thought, from its first act of thinking, for thousands of years, in every mind capable of the simplest thought, and that all law, language and reasoning has been mistaken in making this distinction, and in making it the basis idea of human life and thought. He must show that the present order of things *can* exist without the controlling, originating and regulating energy of mind. He must not only show this, but show that it *does* exist without the originating, controlling, and regulating energy of mind. He must show that the course of evolution is a path along which mind need not, could not and did not travel. He must show that the course of evolution was possible without mind, and that it did transpire without mind. He must show that the primordial constitution of matter and force was possible, and that it did transpire without mind existing anterior to it, to give to matter and force this primordial constitution, or, in other words, create them. We say he must prove that his position is an undoubted fact, before he can ask us to abandon these religious ideas. These cardinal religious ideas have the field of human thought, and have had full possession of it from the very dawn of thought, and this new claimant must disprove their title, and establish its own, before it can obtain possession. Before the atheist daresdemand that we cast to one side these cardinal religious ideas, these fundamental intuitions of man's rational, moral and religious nature, in every mind capable of the simplest thoughts, from the dawn of human thought, he must demonstrate beyond possibility of a doubt, that mind had nothing to do with the primordial constitution of things, that it had nothing to do with the course of development, and that it has nothing to do with the present order of things. Until he demonstrates this beyond a doubt, we will retain these fundamental intuitions of man's religious, moral and rational nature, for they are universal and the invariable and necessary intuitions of the mind.

The pivotal question on which all turns is the existence of God, or an Intelligent First Cause and Ruler and Judge. If this be conceded, or established, all the other ideas are necessary corollaries of this idea of ideas. If the existence of God as creator, ruler and judge of the universe be established, then revelation, providence, prayer and religion are not only possible and probable, but actual and absolutely necessary in the nature of things. Then we should affirm continually, and lay down as the only basis of all reasoning with the materialist, the absolute truth and fundamental character of the distinction between mind and matter and physical force, and between the phenomena produced by mind and that produced by matter and physical force. This regulative thought must not be forgotten or laid to one side for one moment. It should be predicated, as the basis of all reasoning, that there are two domains of existence and phenomena, the mental or spiritual, and the material or physical. It should be held as a fundamental idea that there are two forces in the universe, the mental or spiritual, and the material or physical, and that the two are radically and essentially separate and different, and that one can not be resolved into the other or evolved out of it. Also, that the phenomena produced by mind can not be produced by physical force, and that there are phenomena in the universe that can not be produced by physical force, and can be produced by mind alone. And above it should be held forth as a regulative thought, not to be lost sight of for one moment, that the only spontaneous, self-acting, self-regulating, self-controlling force in the universe, the only spontaneous, self-acting, self-regulating, self-controlling, efficient cause in the universe, is mind.

It must be insisted on as a truth that can not be denied, and that must be a fundamental idea in all reasoning on this topic, that the primordial constitution of matter and force demanded the pre-existence of mind anterior to any existence of matter and force, to give to them this constitution, or to create them. That the primordial constitution of matter and force is absolutely unthinkable without such a ground and basis. That the course of evolution is a path along which mind must necessarily have traveled, and that it is absolutely inconceivable without the pre-existence and the originating, planning, regulating and controlling energy of mind. That the present order of things is unthinkable and absolutely impossible without the originating, controlling and regulating energy of mind. The primordial constitution of matter and force is radiant with the light of intelligence, for in it are realized some of the most exalted conceptions of reason. The course of evolution is a path illuminated by the light of reason, for it can be construed only by the most exalted ideas of reason, and it must have been constructed by reason, realizing in its actions these highest and most abstract ideas of reason. The present order of things is dazzlingly luminous with reason and thought, for the highest conception of reason concerning every department of science, and concerning order, system harmony, beauty, wisdom and beneficence, are displayed in it. The primordial constitution of matter and force did not originate, as is claimed by the materialist, in a chaos of blind, insensate matter and blind, irrational force—in an unconceivable, unthinkable, nondescript state of things in which even the existence of matter and force is inconceivable and unthinkable. Nor was the course of evolution an aimless, purposeless, unintelligent onward sweeping of blind, irrational matter and force. It can only be proved to be such by showing that it was incoherent, disorderly and incapable of being construed or understood by intelligence. Nor is the present order of things an aimless happening of the fatal necessities of blind, irrational matter and force. If mind did not construct the primordial constitution of things, and the course of evolution, and the present order of things, they can not be construed by mind; and if the ideas of reason are not realized in them, they can not be understood or studied or systematized by reason, and all science and knowledge is a chimera. Science is a classifying the facts and phenomena of nature by ideal conceptions, by ideas of reason, and if the facts and phenomena of nature have not been constructed on and by such ideas, and if they are not realized in them by mind, then all such study and understanding and classification of nature is impossible, and science is a delusion.

These cardinal religious ideas are susceptible of two lines of proof, the *a priori*, or the necessities arising out of the idea of God as Creator, Ruler and Judge of the universe; and the *a posteriori*, or the proof based on man's wants and nature.

The existence of God as a self-existent, absolute First Cause of all that exists guarantees the truth of the creation of all things by Him, and the control and government of all things by Him as Ruler and Judge. The idea of a God renders all these ideas a necessity. His government must be an immediate, ever-present and constantly active control. His omnipresence, omniscience and omnipotence render the rationalistic idea of divine government, that divorces God from all connection with, and control of His works, an impossibility and an absurdity. The existence of God as Absolute Spirit, guarantees the existence of lower and finite intelligences. When the materialist, either atheistic or Christian, asks what is spirit? what is the human spirit? we answer that the human spirit is in kind and nature like God, who is Infinite Spirit, but lower in rank or order. The existence of God as Ruler of all things guarantees providential care over all His works, and especially over His intelligent creatures. God sustains to lower intelligences the relation of Ruler and Judge and Father in Heaven, and this relation renders providential care over them by Him a necessity. The exercise of this providential care is not a violation of, or a suspension of, or an interference with the perfect order of nature, but a necessary part of the perfect order of nature. God sustains a relation to intelligences He does not sustain to unintelligent nature. He sustains a higher relation to them than he does to the material world, or a relation that makes His relation to the material world subordinate to, and an instrument of His relation to intelligences. Providence is a necessary part of this relation rendered absolutely necessary by His relation to intelligences as their Father in Heaven.

The existence of God as the Creator, Ruler and Judge of all intelligences, and as a being possessing infinite wisdom, holiness, justice and power, guarantees the reality of the moral ideas of good and evil, and freedom of volition of lower intelligences, right and wrong, righteousness and wickedness, and moral desert in actions and character, and guarantees the ideas of accountability and responsibility to Him as Supreme Ruler and Judge, and retribution here and hereafter by Him as Supreme Executive. The idea of God is the basis of all idea of good and evil, vice and virtue, righteousness and wickedness in conduct and character. If all things originated in matter and force, destitute of moral quality and character, and there is nothing but infinite matter and force, then all idea of good or evil, vice or virtue, moral desert in conduct or character, or responsibility or accountability is a chimera. The consist*ent atheist* denies all freedom of volition and distinction in character between acts. In his system of atheistic evolution of blind matter and force he has no basis for moral quality or desert in action. All that man needs to do is to study the ongoings of nature in time-succession, and cheat blind matter and force out of all the enjoyment he can get, and if he does what religion would pronounce to be wrong there is no Intelligent Ruler, Judge and Executive. Then this idea of God is not only the basis, but the only possible basis for any idea of moral desert or quality in character and conduct, and it alone renders morality, law and government a right and a necessity.

The idea of God guarantees the ideas of prayer, praise and worship and answer to prayer. The relation of God to all created intelligences, as an Infinitely Powerful, Wise, Good and Holy Being, the Creator, Ruler, and Judge of all intelligences, and their Father in heaven, renders prayer and praise a duty on their part. They owe to him awe, veneration, gratitude, obedience, devotion and love, and these emotions should be expressed in prayer, praise and worship. He is the source of all good, and it is the duty of all intelligences to praise and thank him for all blessings, and ask from him those blessings that he alone can bestow. God can justly bestow blessings on those who discharge these duties, that he can not justly give to those who do not. He can and must make blessings contingent on the discharge of these duties, or on prayer. Answer to prayer is not a violation of the perfect order of nature, nor an interference with the perfect order of nature, but is a necessary part of that perfect order, and essential to the perfection of an order of intelligent nature, in which a moral relation exists between a Creator, Ruler and Father of intelligences,and his creatures.

The idea of God as an Infinite Father in heaven, infinite in wisdom, power and goodness, guarantees the idea of providence or a protecting care over his creatures. His wisdom and power render such care possible, his goodness would prompt it, and his relation to them as their Father in heaven, renders the exercise of such providential care a necessity. Such providence is not a violation of the perfect order of nature, or an interference with it, but it is an essential part of such perfect order of nature, and necessary to the perfection of the highest part of nature, moral and spiritual nature.

When the atheist objects to prayer, answer to prayer, and providence, as a violation of the perfect order of nature, he begs the whole question. He must prove that nature can be, or is perfect without these ideas. On the contrary, the idea of God as Creator, Ruler, and Judge and Father in heaven, renders these ideas absolutely necessary to the perfection of nature. They can be invalidated only by destroying that fundamental idea. The intention of Tyndall's famous prayer test was to undermine this basis idea of religion, the existence of God. If the branches of the tree were cut off, the worthless trunk would soon be cut down.

The idea of God as the Creator, Ruler, Judge and Father in heaven of all intelligences, guarantees the validity of the idea of revelation, and renders revelation not only probable and possible, but an absolute necessity. Revelation is a necessity as man is constituted. Man is a worshiping, as essentially a worshiping being, as he is a rational or social being. He becomes like the Being he worships. Religion is the regnant element in morals and conduct. Then man must have a pure object of worship and a pure religion. He can not discover or devise such an object of worship or such a system of religion. God's existence and natural attributes are discoverable by human reason, but the perfection of his moral attributes is not discoverable by reason. Man is imperfect and impure. He has never been able to emancipate himself from the thralldom of impure systems of religion.

Not a language on earth contains words that express the scriptural ideas of holiness and abhorrence of sin, except those in which the Scriptures were given, or into which they have been translated. And in the case of translation, it takes generations to elevate a word so as to express these ideas. These attributes of God are the ones that man must know to be saved from sin. Hence God must reveal himself, and reveal a pure religion. Man needs this revelation of God as an object of aspiration and devotion, a model, a lifting and expanding power in life and soul. He needs a revelation of truth in religion as a standard of right and wrong, and guide in duty, and rule of life, and the idea that it is a revelation from God, as a sanction to it, to give to it authority. He needs this as an objective standard of teaching in morals and religion.

Said one of the wisest of ancients, "The utmost that man can do is to attribute to the Being he worships his own imperfections and impurities, magnified to infinity it may be, and then became worse by their reflex action on his nature, as he worships them." Then, the ideas of God and man's constitution guarantee the validity of the idea of revelation. Revelation is not a violation of the perfect order of nature, nor an interference with the perfect order of nature, nor a suspension of the perfect order of nature, but it is a part, a necessary part, of this perfect order of nature, a part necessary to its perfection, rendered necessary to its perfection by the relation God sustains to man as his Creator, Ruler, Judge and Father in heaven.

It has been objected, sometimes, that a revelation from such a being as God would be overpowering in its influence on man and would destroy his individuality, and be enslaving in its influence, overpowering his reason and will. If given by inspiration of chosen men, it would have its human, as well as its divine element, and would not have this overpowering influence. If what is revealed be the truth, as it must be, if given by inspiration of God, it would be elevating and purifying, as the truth in its very nature must be. Imparting truth, above the power of discovery of the person taught, is elevating and purifying, and does not interfere with the individuality or freedom of the person taught, nor is it overpowering in its influence, if he can grasp it. If he can grasp it, it is elevating and educating in tendency. If he can not, it does not affect him at all, except to stimulate him to endeavor to understand it. Revealed truth, then, is an educating influence of the highest possible character, a dynamic lifting force, starting the mind in its upward course, lifting and leading it upward, and sustaining and controlling and directing it in its upward course.

The idea of God guarantees the validity of the idea of miracles, as an evidence of the superhuman origin of religion and revelation, and as the credentials of inspiration, and revelation. But before we enter into the discussion of this topic, let me define what we mean by "natural," "supernatural" and a "miracle," for no subject has been more befogged and bemuddled, than this question of miracles. The term "nature" has general meanings, and also restricted or technical meanings. In its general or broadest sense, it includes all being, and there is nothing supernatural.

I. It includes Deity himself, "Partakers of the Divine nature."—Paul. Then there is Divine nature.

II. It includes angelic nature. "He took not the nature of angels."—Hebrew letter. There is an angelic nature.

III. It includes human nature. "He took on him the seed of Abraham."—Hebrew letter. There is a human nature.

IV. It includes animal nature.

V. It includes physical nature.

Then we make other divisions, animate nature and inanimate nature. Organic nature and inorganic nature. Mental or rational nature and irrational nature. These divisions are sometimes difficult to make. Taking the distinction between matter and force, we have dynamic nature and material nature. Then the question arises, How shall we divide dynamic nature? Shall we have vital force and physical force? Where shall we place vegetable life or force? Shall we have spiritual or mental force or nature, psychical or animal force or nature, vegetable force and physical force? Where shall we place animal life? Is it distinct from mind or mental force? Shall we have two kinds of mental force, spiritual or rational, and psychical or mere animal understanding? Shall we place vegetable life in physical force? Or shall we distinguish between physical force and vital force, and then divide vital force into vegetable, animal or psychical, and rational or spiritual? Then in its broadest sense the term "nature" includes all being. Spiritual nature includes all spirit. Dynamic nature includes all force. Material nature includes all matter.

Sometimes the term nature is used as the correlative of man, especially of his rational or spiritual nature, as when we say man is lord of nature or he studies nature. Again it includes man, animal and physical nature, or man, animals and physical force and matter; and then man is a part of nature. There is a mental or a spiritual nature, and a physical nature; and in this use of nature, man's entire nature is a part of nature. Nature is used in this latter [illegible] I apprehend, when we say a miracle is supernatural [illegible] nomenon produced by supernatural power. We [illegible] it is produced by an intelligence above man. It [illegible] duced by matter and physical force [illegible] which [illegible] include in nature, in this use of the [illegible] The [illegible] includes matter, physical force and [illegible] they [illegible] The supernatural includes all that [illegible] telligence above man and physical [illegible] all produced by such intelligence. I [illegible] not [illegible] term "supernatural," for it is liable [illegible] In one sense, an event may be super[illegible] pernatural in the above technical or [illegible] general or broad use of the term, [illegible] natural and no event can be.

We can very often get a better insight [illegible] words, by tracing their history. We [illegible] in certain uses of them, by learning how [illegible] used. Let us endeavor to trace, in this [illegible] and use of the terms "natural" and "sup[illegible] nection with religion, especially in [illegible] and revelation. The Scriptures teach that [illegible] *matter of the* earth and the forces manif[illegible]

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all this is called natural. After man sinned he needed revelation, a revealed religion. This was given by direct revelation through angels, or through inspired men. All such revelation and inspiration, and the phenomena in attestation of it, were called supernatural. Then in this application of the term natural, it included all that mere physical nature, or man, or man using physical nature, could do, or did. The supernatural included all that was done by other intelligences than man. Natural existences are matter, physical force, vegetable and animal existences and man. Natural phenomena include all that matter, physical force or man can do. Supernatural existences include all other intelligences than man. Supernatural phenomena include all phenomena produced by any other intelligence than man. The spirits of dead men and the phenomena produced by them, angels and
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We can very often get a better insight into the meaning of words, by tracing their history. We learn what they mean in certain uses of them, by learning how they came to be so used. Let us endeavor to trace, in this way, the application and use of the terms "natural" and "supernatural," in connection with religion, especially in connection with miracles and revelation. The Scriptures teach that God created the *matter of* the earth and the forces manifested in it. He created matter, physical force, vegetable and animal existences, and man; and placed man over his works, as lord of creation. Creation was then complete, and matter, physical force, vegetable and animal existences and man constituted the system of nature. It is in this sense that the term nature is used, and all this is called natural. After man sinned he needed revelation, a revealed religion. This was given by direct revelation through angels, or through inspired men. All such revelation and inspiration, and the phenomena in attestation of it, were called supernatural. Then in this application of the term natural, it included all that mere physical nature, or man, or man using physical nature, could do, or did. The supernatural included all that was done by other intelligences than man. Natural existences are matter, physical force, vegetable and animal existences and man. Natural phenomena include all that matter, physical force or man can do. Supernatural existences include all other intelligences than man. Supernatural phenomena include all phenomena produced by any other intelligence than man. The spirits of dead men and the phenomena produced by them, angels and the phenomena produced by them, and Divinity and the phenomena produced by Divinity (aside from what is produced through the operation of nature as defined above), are all included in the supernatural.

Then the term miracle includes all phenomena produced by other intelligences than man, as he lives here in this world, or as he exists before death; such as revelation, inspiration and the phenomena produced by such intelligences in connection with revelation and inspiration, and in attestation of them. The Greek term translated miracle, literally means a sign, and when used as it is in the passages where it is translated miracle, it means a sign of the presence and activity of another intelligence than man. The intelligences were generally above man, but not necessarily so, for the spirits of dead men were included among them. The phenomena were generally above what man could do, but not necessarily so. If unconnected with man's agency or instrumentality, it need only be above what physical nature could do—the work of intelligence, and need not be above what man could do. If connected with man's agency or instrumentality, it must be above what he could do. It was usually wonderful and strange, but gratifying mere wonder and love of the marvelous and strange was no part of the object of miracles. Paul condemned mere wonder-working and a mere gratification of the love of the marvelous. The miracle was generally of a grand, exalted and divine character, but not necessarily or always so, as the miracle of Balaam's ass, and the drowning of the swine, clearly show. It was generally beneficial, but not always so. The cursing of the barren fig tree was not. The miracle was generally useful, and intended to be always so, but men could pervert the power and abuse it, as did the men speaking with tongues in the Corinthian church. The one essential characteristic was that it be a sign of the presence and activity of another intelligence than man. All such phenomena, and the intelligence producing them, were included in the term supernatural.

The query still stands unanswered, however. If we accept the above technical use of the terms, natural and supernatural in defining a miracle, how can we distinguish between the natural and the supernatural? How can we tell when an event is above matter, physical force, and man, and produced by an intelligence above these departments of nature? Perhaps we can not better accomplish this, than by an examination of the meaning and nature of miracles. A miracle is not a violation of the order or laws of nature, nor an interference with them, nor a suspension of them. Nor is an event a miracle because human experience has never met with it before. Nor is a thing a miracle because it never occurred before. Nor because it is wonderful. Nor is a thing a miracle because we do not understand its cause. Nor must an event be without a cause in order to be a miracle. Nor must it be without second cause or means to be a miracle. Nor would a knowledge of the cause of an event strip it of its miraculous character. Nor is it necessary that an event be above human power to be a miracle. We may know how a thing may be done and yet it be a miracle. It may be performed through second causes and be a miracle. It may be within the power of man and be a miracle. It might be a common or ordinary occurrence and be a miracle. What, then, are the characteristics of a miracle?

I. It must be above the power of mere physical nature. This alone does not constitute a miracle. Man's works are above mere physical nature, but they are not miraculous.

II. It is generally out of the usual course of things. This does not make an event a miracle, for an event might be customary and usual, and yet be a miracle.

III. It must, in some way, be evidently the work of intelligence and volition, either by its being declared to be such by the higher power producing it, or by its being wrought in accordance with the prophecy or command of some one.

IV. If performed by man, or if he be the agent or instrument in performing it, it must be above what man himself can do, or what he can accomplish, using the forces of nature.

V. Then a miracle is an act performed by some other intelligence than man, and generally superior to man.

VI. It may be a direct act, without the use of second causes or means, but it is not necessarily such an act. Because we can not see the second causes we can not deny their use. Nor should we assume that there are no second causes. Above all, we should not assume that a miracle is an event without a cause. Nor allow opponents of miracles to attach such an absurd characteristic to them. Huxley is guilty of gross ignorance, or gross unfairness, in attaching to miracles such a characteristic. If the event be above physical nature, as a cause, and unconnected with man's instrumentality, and evidently the work of intelligence; or if connected with man's instrumentality, if it be above the power of man, or his power using physical nature, it is a miracle. It must obviously be the work of intelligence, and has a cause, an intelligent cause.

VII. We have said that it is not necessary that an event be unusual or strange to be a miracle, although miracles were of that character. The scriptural meaning of a miracle is a sign—a sign of the presence or activity of an intelligence distinct from and usually superior to man. Hence, if angels or God were to perform acts or produce phenomena, such as are called miracles or signs in the Scriptures, every hour, it would not destroy their miraculous character, because they were customary. They would still be signs of the presence and activity of an intelligence distinct from man and superior to him.

VIII. Then an intelligence, separate and distinct from man, may intervene in the operations of nature, just as man does, to accomplish what mere physical nature alone can not do. Then an event unconnected with human agency and obviously above the power of mere physical nature, because the work of intelligence is a miracle. The essential characteristic proving that it is above mere physical nature, is that it is obviously the work of intelligence. It is a miracle because the work of intelligence, and some other intelligence than man.

IX. An intelligence distinct from man may, in connection with man, intervene in the operations of nature, and by using the powers of nature as man does, accomplish what mere physical nature can not do, or what man can not do, or what man, using physical nature, can not do. The essential characteristic in this case is, that it must obviously be the work of intelligence, and above what physical nature can do, or man can do, or man using physical nature can do. It is the work of some other intelligence than man.

X. Then the necessary distinction between a miracle on the one hand, and what physical nature can accomplish, or man can accomplish, or man using physical nature can accomplish, is this: If transpiring unconnected with man's agency, it must be above the power of physical nature, the work of an intelligence above physical nature. It may or it may not be above what man could do. If it be the work of an intelligence, and man had nothing to do with it, it would be a miracle, whether it be above what man could do or not. If performed in connection with man's instrumentality, it must be above the power of physical nature, and above man's power, and above the power of man using physical nature. It is the work of an intelligence distinct from man and above man.

XI. It is not a violation of the perfect order of nature, nor an interference with the perfect order of nature, nor a suspension of the perfect order of nature, but the appearance of a higher part of nature, and a higher and more perfect use of nature than appears in the phenomena of physical nature or in man's use of nature. It is in accordance with a higher law of nature, a higher order of nature, than man's use of nature.

XII. Nature is physical, human and superhuman, and in the superhuman we have the divine. If we include all nature, a miracle is not supernatural; it is super-physical and superhuman, but not super-angelic or super-divine.

XIII. Then a miracle is an occurrence that is a sign of the activity and presence of an intelligence distinct from man. It may be immediate or without human agency, or mediate, or through human agency. When it occurs at the word or prophecy or through the agency of man, it is an evidence that he has superhuman aid. Miracles are the credentials of inspiration and revelation. Men never have accepted any thing as inspiration and revelation, or regarded a man as inspired without miracles, as credentials. If superhuman origin or aid is claimed, miracles are demanded as the evidence or credentials.

The old theologians thought a miracle must not only be out of power of man and physical nature to be unique and evidently of superhuman origin, but it must be a suspension of the order of nature, or a violation of the order of nature, and without a cause, or at least unconnected with known causes or the order of nature. The skeptic accepts these characteristics, and often exaggerates them, and then appeals to the *uniformity of nature* to prove that no such events can occur. He also appeals to the fact that the laws and order of nature are the work of a perfect being, and must be perfect. Hence, a miracle is a violation of this perfect order, and an interference with its perfection, or a confession that the order was not perfect at first. He appeals to the perfection of the order of nature to show that a miracle, as defined by old theologians, is an impossibility.

I have attempted to remove the objections of the skeptic, by removing the objectionable characteristics that he and the old theologians have attached to them. I have attempted to make them a part of the perfect system of nature—the appearance of a higher part of nature. The only question now is, Have I accomplished this and avoided stripping miracles of characteristics that they actually possess, and that are essential to the accomplishment of their purpose—a sign of the presence and activity of another intelligence than man? Have I stripped miracles of essential characteristics, and lowered them to the level of ordinary events? Have I included all that is essential to them, and to their purpose, while attempting to strip them of excrescences that theologians and skeptics have attached to them?

I have reached these conclusions: When used in defining a miracle, the word natural includes physical force, matter and man, and what they can produce. The term supernatural includes intelligences above man and phenomena produced by them. It would be well to drop this technical use of these words, for it most invariably leads to confusion. We can distinguish between a miraculous event, and one that is not, by these characteristics. If unconnected with man's agency or instrumentality, it must be above mere physical force or matter. The characteristic determining this is, it is undeniably the work of an intelligence—some other intelligence than man. If performed in connection with man, through his agency or instrumentality, it must be undeniably above the power of physical nature, and above the power of man using physical nature. It must be the work of an intelligence other than man. One difficulty, then, will be to show that the event was not performed through man's instrumentality. Deception and trickery must be guarded against. Many of the miracles of spiritualism are evidently the work of intelligence, and above mere physical nature; but they are performed by the medium unconsciously, especially when the medium is in an abnormal condition. When performed through the agency or instrumentality of man, we have to determine again that the event is above the power of physical nature. Its being undeniably the work of intelligence will do this. Then comes the most difficult task. We have to determine whether it be above the power of man or his power using physical nature. First we have to guard against fraud and deception, and know that the event transpired, and just what transpired. Delusion and exaggeration must be guarded against. Having learned the exact proportions of the event, and that it is the work of intelligence, then the question arises, What can man do, and what can he do using the powers of physical nature? Here is another problem: Do we know the limit of man's power in both normal and abnormal states? Here is one source of error in spiritualism. Some of its phenomena actually transpire. They are the work of an intelligence, and they are strange and wonderful, hence they conclude they are above man's power, and the work of an intelligence other than man; when they are the work of man, the medium in an abnormal state. They have not learned and defined the limit of man's power in an abnormal condition.

Then an event unconnected with man's agency or instrumentality, and evidently the work of intelligence, is a miracle or the sign of the presence and activity of some other intelligence than man. An event performed in connection with man's agency or instrumentality is a miracle if undeniably the work of an intelligence, and undeniably above the power of physical nature, and above the power of man using physical nature. It is a sign of the presence and activity of some other intelligence than man.

We have shown that the existence of God guaranteed the validity of revelation and inspiration. The existence of the cause of miracles is guaranteed by the existence of God; and as a necessary consequence the possibility of miracles, for it gives the higher intelligence needed as the cause of miracles. It guarantees, also, the validity of this idea of miracles, for revelation being a necessity, if God exists as our Father in heaven, then miracles are necessary as the evidence and credentials of revelation and inspiration.

The fundamental error of the materialist, and the source of all other errors, is, that he overlooks entirely the mental and spiritual world and its phenomena. He entirely ignores and refuses to investigate or accept the phenomena of the mental and spiritual world, and thus violates all inductive philosophy, which he claims to take as his guide. He confounds these entirely distinct and radically dissimilar phenomena, and persists in dragging down the mental and spiritual world to a level with the material world, and merges it into, or buries it *up in* the material world. He lays down as the object of all *study, and the* sum of all wisdom, that we study the ongoings of physical nature in time-succession, and then accommodate our lives to what we thus learn. But such a philosophy is most false and pernicious. Man does not progress by abject submission to the ongoing of physical nature. Man progresses as he learns the operations of nature, and intervenes in them, and controls them, and renders them submissive to himself; and not as he obeys them. Man's progress is not measured by his obedience to physical nature, but by his subjecting physical nature, and making it obey him. The less he interferes with, and controvenes the ongoings of physical nature, the more degraded he is. What the atheist presents as the highest end of man's nature and effort, would degrade him to the level of the brute, that is absolutely submissive to the ongoings of physical nature. It is a fatal error of the atheist that he makes the laws and ongoings of physical nature so sacred, that they can not be modified for the higher world—the mental and spiritual world. He makes mind the slave of matter, instead of making matter the servant of mind. The material world was made for man, and not man for the material world. Man can intervene in the operations of nature, and modify the processes of matter and physical force, and render them subservient to his uses and needs. Higher intelligences can to a higher degree than man, and God can to an absolute degree, limited only by the moral necessities and perfections of his being. All the objections and analogies of the materialist are taken from the physical world, entirely dissimilar to the spiritual world, and entirely below it. If the advocates of these great religious ideas expose, as they always should, this fallacy of the materialist, and set to one side the sophistries based on it, there will not be an objection to these ideas left.

Then in the investigation of these great religious ideas, we have man's moral and religious nature as the data, and the only data, by means of which they can be investigated. Man has a moral, rational, and religious nature, and from the earliest dawn of human experience, in nine hundred and ninety-nine thousand nine hundred and ninety-nine cases out of every million, man's rational, moral, and religious nature has given him as its catholic ideas, its universal affirmations, its most invariable intuitions, these cardinal, religious ideas. In settling the validity of these catholic, religious ideas, we use the analogies of the parental relation, and government, of the ruler and subject, and man's social relations and educational agencies and their appliances. As man has ever entered into these relations as the highest use and achievement of his highest nature, these analogies are infinitely above those of the material world. God, as an intelligence, sustains to us a relation that he does not to the material world, and analogous to the relations of the parental, governmental, social, and educational life of man. These relations and their analogies are germain to the investigation before us, and the facts and laws of the physical world are utterly foreign to it. Then the facts, laws, and analogies of these human relations are the data, and the only data, that are relevant to an investigation whether these catholic, religious ideas be valid or not. We propose now to examine man's needs, as determined by his rational, moral, and religious relations, and determine, *a posteriori*, the validity of these catholic, religious ideas. In human society and life, we have the parental relation, government and authority. This relation is chosen by the Scriptures to express the perfect idea of the relation that God sustains to us. This relation, government, and authority do not interfere with human freedom or individuality, nor are they enslaving. On the contrary, they are absolutely necessary to the highest good of the individual, and true freedom can only be secured and maintained through this relation, government, and authority. In all relations and intercourse of men, there must be system, order, regulation, and government. Human government does not interfere with human individuality or freedom, nor does it enslave. On the contrary, true freedom and the greatest good of the individual can be secured and maintained only through human governments, properly constituted and administered. Then this intuition of divine government by God as our Father in heaven, is entirely in accordance with man's rational, moral, and religious nature, and is demanded by it, and is its highest idea, and is necessary to man's highest good. The basis idea of all conceptions of right and wrong, all morality, all law, order, government, and society is the idea of God as ruler and judge of men as their Father in heaven.

Men intuitively divide all events into two classes, voluntary and involuntary. They as intuitively divide all voluntary actions into two classes, good and evil, and they apply these characteristics to voluntary acts alone. They intuitively divide voluntary acts and their results into the categories of good and evil, right and wrong. To voluntary acts and their results they intuitively attach the ideas and characteristics of responsibility and accountability. Parents deal thus with their children. So do governments with subjects. So do all men with each other. All language, thought, reasoning, and society, law, and government, are based on these ideas. Out of *these ideas flows* naturally the idea of retribution or reward and punishment. Parents invariably deal with their children on this idea. So do governments with their subjects. So do all men with each other. These ideas of good and evil, accountability, responsibility, reward and punishment have their basis in the idea of God as supreme lawgiver, ruler, judge and executive, as our Father in heaven. Men intuitively recognize the truth that the universe is conducted and controlled in accordance with these ideas, and that God deals with men in accordance with them. They are necessary ideas, intuitions of man's nature. These ideas, and the truth that they all have their basis, center and perfect realization in God, as the creator, lawgiver, ruler, judge and executive of the universe, are necessary to the existence of law, order, society, government and morality, and are demanded by the highest interests of each individual, and the race. We repeat that these ideas of God as lawgiver, ruler, judge and executive, and of retribution by him, and of his will and authority, are the basis of all ideas of good and evil, right and wrong, reward and punishment, responsibility, accountability and retribution, and the sanction of all law, order, government and authority.

Parents exercise a protecting, guarding, providential care over their children. Their relation to them as those who have brought them into being, and as those who have superior wisdom, and the power to thus protect and guard and provide for them, renders it their duty to do so. The highest interests of the child demand it. There is no violation of the laws of nature, when a parent protects his child from injury by physical nature. Or when he so controls the laws of nature, as to make them subservient to the interests of the child. It is the exercise of a higher nature, and a proper use of physical nature. Providential care over his creatures is a necessary part of the relation that God sustains to them as their Father. He brought them into being, and his wisdom, power and ability to protect, guard and provide for them, make such providence a necessary part of the relation he sustains to them. He no more violates the perfect order of nature, when he exercises such providential care over us, than a parent does when he exercises similar providential care over a child. It is a part of the perfect order of nature when we include, as we should, all nature, intelligent nature as well as physical nature, and necessary to its perfection. It is but just, and a necessary part of the moral government of God, necessary to its perfection, that God should exercise a care over the obedient that he does not over the disobedient and ungrateful. Parents, governments, and all men so act in their exercise of providential care for others.

In the family and other relations, the child is expected to exercise reverence and veneration toward his parents and superiors. So are all persons, in all relations. The child and needy persons are expected to ask properly for favors, and what they need. They are expected to be grateful for them. Parents and benefactors can justly make favors contingent on the discharge of these duties. They are justified in bestowing them on the performance of these duties, and in refusing them, in case of a refusal or neglect to perform them. In like manner, we owe reverence, awe and worship to God. We should ask properly for favors, and be grateful to him as our Father. He can and does make blessings contingent on the discharge of these duties. He can justly bestow on us blessings only when we discharge such duties, and he will justly refuse us blessings when we neglect or refuse to discharge them. We do not expect to induce God to give us what he did not design for us, or what is not right for us to have. But we can make it right for God to give us these blessings, because we have placed ourselves in the right relation to him. We do not obtain what God did not design for us, but he designs to give us these blessings because we have done our duty, and made it right for him to give them to us. Then prayer and answer to prayer are not a violation of the perfect order of nature, but a necessary part of such perfect order of nature, and necessary to that perfection that the materialist supposes is impeached by the idea.

In the case of children and those who are ignorant of what they should know, teaching or revelation of what they do not know, and can not attain by their own efforts, is the duty of parents and all possessing such knowledge. It is demanded by duty and benevolence. The highest interests of the taught demand it. There is no violation of nature, or their nature in such teaching, but a meeting of one of the demands of their nature. It is the highest use of their nature. There is no violation of the freedom or individuality of the taught, but such instruction is necessary to the perfection of both. Then revelation of truth on moral, religious subjects, revelation of such truth as man could not attain by his own efforts, is a necessary part of the relation God, as our Father in heaven, sustains to us, his creatures. It is demanded by our nature. It is necessary to a proper use of our nature, and the highest use of our nature. Warning children of coming dangers and duties, and such warning of the ignorant or those exposed to danger, is a duty of all who can give such warning. It is demanded by the highest interests of the benefited. Then prophecy is a necessary part of God's revelation to us. It warns us of coming events and duties, prepares us for them, and cheers and sustains us in duty and trial.

It is often objected that such revelation would be overpowering in its influence, and enslaving in its tendency, if it came from an infinite being. It must have its human as well as its divine side, to be adapted to man. It must be given by inspiration of God, through inspired men. This brings it within man's reach, gives to it a human side, and saves it from becoming overpowering in its influence. Its divine element gives it sanction and authority, and its human element adapts it to man's capacity and nature. Miracles are a necessary part of this revelation of religious and moral truth. They are necessary as the credentials of inspiration and revelation. A miracle is a sign of the presence of a higher intelligence, a necessary sign and credential of inspiration by and revelation from such intelligence. Miracles are not a violation of the laws of nature, any more than man's use of nature is a violation of nature. They are a higher use of nature than man can make, a use by a higher intelligence, and for a higher purpose. Then these cardinal religious ideas of providence, answer to prayer, revelation, inspiration, prophecy and miracle, are a necessary part of the moral and religious domain of nature, the higher, moral and spiritual world, for which the physical world exists. They are a necessary part of a moral and spiritual world, in which God exists as the creator, lawgiver and ruler of men as their Father in heaven. They are not a violation of nature, but a part of nature, the highest part of nature, and the highest use of physical nature. Taking the moral and spiritual world as our bases of reasoning, and man's moral and spiritual nature as our standard, and we must accept these cardinal intuitions of our rational, moral and religious nature.

Sacrifice as a confession of sin, and as a means of expiation and propitiation, and as an expression of gratitude, is universal. It is a part of all religions, and is found in all nations and tribes of men, and has been thus universally practiced in all ages. It is either the result of the constitution of man's religious nature, or of tradition from primitive revelation, or both. In either case its propriety and efficacy is established. In giving man a revealed religion, God would take this universal instinct of humanity, and by elevating and developing, would make it a means of religious cultivation and elevation. Atonement is another catholic religious idea.

So also is sacrifice as a means of atonement. Infidelity has ever persistently clamored against this universal idea of all religions. It overlooks certain facts in nature and in the moral world.

Vicarious suffering is the order of nature. We came into being by the suffering of another. We are reared to manhood by the vicarious toil and sacrifice of others. Moral elevation and progress has ever been through the vicarious self-sacrifice of the good and the noble. The patriot, the philanthropist and the martyr, have ever given themselves for the enslaved, the unfortunate, the helpless, and even the ignorant, vicious and degraded. They never receive the good they confer on others. The patriot and martyr never receive the result of their sacrifices. It accrues to others and generally to the ones who destroy them. The missionary and philanthropist who labor for the vicious and criminal, are persecuted and slain by the ones for whom they sacrificed themselves. Then the moral elevation of the race has ever been through the vicarious suffering and self-sacrifice of the good and noble, for the ignorant, fallen, degraded and unfortunate; and often for the vicious and ungrateful. Such is the order of moral nature. This the infidel overlooks. Then the vicarious atonement of the Son of God is in exact accordance with the order of nature.

Expiation, or the suffering of the good for the vicious, is another universal idea of religion. It is necessary to vindicate the majesty of the government and law, and to express the guilt and enormity of sin. Also to express the regard God has for the majesty of His government, and the inviolability of His law, and His abhorrence of sin, and to show the inviolability of his law. Also to produce remorse and sorrow for sin, and to arouse the moral nature of the sinner, and to appeal to his gratitude, and secure his love and devotion, to the one thus suffering for him. Administrative justice, and not retributive justice, demands expiation. It is demanded by man's needs, and not by any necessity of the divine nature.

Mediation is another intuition of our nature. When we have injured any one dear to us, and produced alienation, we invariably and instinctively seek for a person of excellent character, and of influence with the one we have injured, to act as mediator, and secure reconciliation. Man is led by devotion to an exalted person, by faith in and love for a person, far more than by mere abstract teaching or doctrine. Man needs, also, an embodiment of doctrine, and a personal exponent and example of truth, especially moral and religious truth.

Man needs a personal object of faith, devotion, gratitude and love in morals and religion. All revolutions and reformations have had such leaders, such exponents, such objects of faith, devotion and love. Men must have them, and millions are led by devotion to them into the right, for every one who is controlled by abstract truth alone. All religions have had, also, their incarnations, manifestations of divinity in human form. Such incarnation, such taking on of humanity by divinity, is necessary to divest religion of that overpowering influence, that the infidels object to. It is needed to give man confidence to approach God. If this sacrifice that man needs, this atonement, this expiation, this mediator, this personal leader, this embodiment and exponent of doctrine, this personal object of faith, devotion and love, be an incarnation or a manifestation of divinity in human form, these ideas are then made universal and absolute—they are perfected. The human side or element gives confidence to approach God, and gives devotion and love. The divine side or element gives confidence in the sufficiency of the sacrifice, atonement and mediator.

Forgiveness of sin is a cardinal idea of all religions, and sacrifice and atonement are universal as means of obtaining forgiveness. The skeptic objects to this idea of forgiveness of sin. He assures us that it is untaught by nature, and utterly contradicted by nature, and that it is a violation of the order of nature, and that it is unjust and a destruction of all justice, law and morality. His objections and illustrations are all taken from physical nature. There is physical law and moral law. If a man violates physical law the penalty always follows, though there is recuperative power, and remedy in this case, if there is reformation. If we violate moral law, the penalty as certainly follows. It is of two kinds. The subjective, or that which inheres in the sin, and follows transgression as certainly as the shadow follows the substance, such as remorse, guilt, sense of degradation, self-reproach, injury to moral and spiritual nature, and the cultivation of evil habits and propensities. Also the objective or that inflicted by the person sinned against, such as the loss of the love, confidence, favors and society of the persons sinned against, and the infliction of positive evil or penalty. In the case of a disobedient child, the parent inflicts the latter class of penalties. So does society and human governments. So does God also. The first inheres in the sin itself, and God inflicts this also. If a father has two children that have both disobeyed him alike, and one is rebellious and defiant, and the other penitent and wishing to reform and be restored to favor, he can not, and will not, treat both alike. He can and must remove the objective penalty of sin inflicted by himself, but the subjective must be removed by the reformed life of the offender.

In like manner society should remove the objective penalty in case of reformation, but the subjective, the offender must remove by the right kind of life. Then, regarding God as our Father in heaven, he can and will pardon us if we repent and reform, and remove the objective penalty, but the subjective we can remove only by living a holy life. In this sense we work out our salvation from sin. The objections of the skeptic to these cardinal ideas of religion are based on the laws and analogies of the physical world that are utterly inapplicable. He overlooks the laws and analogies of the moral and spiritual world that are alone applicable. He also perverts and misstates these cardinal ideas of religion. He drags the spiritual world down into the material world, and buries it up in the material world. If his theory of the universe be true, the man who helps an unfortunate, a diseased, or degraded person, or cures a disease, violates law, and is as much a criminal as one who helps a criminal to escape the sheriff. His view and examination of nature are most defective and distorted.

Then these great ideas are not a violation of the perfect order of nature, nor patching up of nature, but a necessary part, and the highest part, of a perfect order of nature. Man has ever attempted to embody these cardinal ideas in a system of religion, with dogma or truth to be believed, and worship or prayer, praise, and acts of adoration and devotion, and discipline, or rules for conduct and life. He has always given to this religion ordinances and an organization and officers. Governments and societies must have organization, ordinances, and officers; they are necessary to their efficiency, wants, and very existence. The same holds true of religion. Ordinances accomplish the same purposes in religion and embody some great truth. Organization is necessary to systematic work, and officers as leaders. Then following a true inductive philosophy, and taking the data furnished by man's moral and religious nature, as the subject of investigation, and its great intuitions as our standard, we can no more reject these cardinal ideas of religion than we can gravitation or crystallization in the physical world. Science may elevate these great religious ideas, and strip them of errors that man has attached to them, but it can not eradicate them. It may develop and amplify them, but it can not eliminate them. A man would only demonstrate his own folly who would reject all idea of gravitation or chemical action, because he can not find them in the moral and religious world. But his folly would be no greater than that of certain would-be philosophers of our own day, who reject these cardinal religious ideas because they are not deposited as a residuum in their retorts or crucibles, and they can not be weighed in their scales, or dissected with their scalpels. A true inductive philosophy would give them more certainty than the results of the physical world, for it is only by means of them that the results of the physical world can be reached.

If we have accomplished our purpose, we have shown the fallacy and utter lack of true philosophical method in the course of the materialist, and shown that by a true philosophic method, these great cardinal ideas of religion are verified and justified, and it is only by means of them that a true science of the universe can be constructed. Physical science without them, no more gives us a true science of nature, than a treatise on anatomy would be a description of man. As in one case the mind, the spirit, that for which the body exists, would be omitted; so in the other the moral and religious element of nature, that for which physical nature exists, would be omitted. It is only the lifeless corpse, and not the living organization, that the materialist examines, and as the corpse decays under the investigation of the anatomist, so nature decays and rots under the search of the materialist into irreligion, godlessness, selfishness, brutality and crime. In science as in religion, "The fear of the Lord is the beginning of wisdom, and a knowledge of His holy will the foundation of all understanding."

CHAPTER VIII.

EVOLUTION AND THE PERMANENCE OF RELIGION.

In this, our concluding chapter, we will inquire whether the permanence of any system of religion be compatible with the evolution and progress claimed by modern thought. All will concede that man began in a condition of child-like simplicity, and ignorance, and that he has progressed in arts, science, and civilization. All will concede that he will continue to progress so long as he makes a right use of the means of progress around him. What effect will this continual progress have on the permanence of Christianity or any system of religion? Some contend that the result of this progress will be the elimination of all religion out of human life and thought. Such persons contend that religion is a perversion of man's veneration and marvelousness or spirituality. The fallacy of such an assumption is apparent, when we remember that all other intuitions or elements of our nature are to be elevated, purified and amplified. But the religious element is to be eradicated, and we can see no reason why, except that the wish is father to the thought. They wish to get rid of the restraint of these great religious ideas.

In our last chapter we demonstrated that these cardinal religious ideas are a necessary part of our nature, and the highest part of our nature. Progress will not change man's nature except by development. It will not eradicate the regnant element of man's own nature. It will only elevate, purify, and enlarge it. As man progresses and acquires greater knowledge and power, he will have still greater need of the regulative influence of this regnant element of his nature. As we increase the speed of machinery we do not dispense with the need of regulating control. We increase the necessity for it.

Religion has ever been the animating principle of all great reforms, revolutions and movements of the human mind. All law, government, philanthropy, and exalted enthusiasm has owed its origin to religion; has been based on it, and animated and controlled by it. It has furnished to poetry, painting, *sculpture*, and art, their animating principle and their most exalted themes. If man had been divested, in his infancy, of this life-giving power, would the race have produced a Gautema, a Zoroaster, an Abraham, a Moses, a Solomon, a David, a Socrates, a Plato, a Paul, a Luther, a Howard, a Homer, a Dante, a Virgil, a Milton, a Locke, Newton or Bacon? Would mere materialism have given us the Iliad, Æneid, a Paradise Lost, a Book of Job, a Book of Psalms, or the morality of Moses, Socrates, Plato, Solomon, Paul, or Christ? The automaton—the caoutchouc man of Faber—is as much man as the ideal man of modern materialism, without moral or religious nature. If the anatomist were to insist on expelling from the body all mind, life, and spirit, as necessary to a proper study of man, and then insist that his classified statements concerning the decaying skeleton are a complete science of man, he would be guilty of no greater madness than is attempted by modern science, so-called. Progress will no more eliminate religion out of man's nature or life and thought, than anatomy will eliminate life or the mind out of the body. As a true science of man gives to the spirit the highest and most important place and regards the body as the servant of the mind, so does a true science of human progress gives to religion the highest and a controlling influence in the life of the race.

There remains one more question: "Can any system of religion remain the permanent religion of the race if man continues to progress?" Will not the race outgrow any system of religion in its progress? Will not the permanence of any system be a barrier in the way of progress? Will not such a system at last check human progress, at a certain stage, and petrify it at that point? Must not man construct for himself new systems of religion, or at least enlarge and improve what he has by adding to it, as he does in science?

Truth is of two kinds, the accidental and partial, and the universal and eternal. Law and religion are of three kinds: Negative law, or that which merely forbids what is wrong; positive statutory law, which undertakes to specify in detail all duty and how it is to be performed; universal law, or a law of general truths, universally applicable principles. The first is suited to children and the childhood of the race. The second is disciplinary in character, and is suited to youth and the youth of the race. The third is suited to manhood and the manhood of the race.

Mankind can outgrow a system of negative precepts, for as the child soon needs instruction and discipline, and so does the race. Man can outgrow a system of positive statutory law, just as the youth outgrows such a system of discipline and restraint as he approaches manhood. Then systems of religion of either of these two characters, man could and would outgrow, in his progress. Man has outgrown such systems of law in religion, wherever he has progressed and advanced in civilization and knowledge; and he will always outgrow all such systems.

But a system of general principles, a system of universally and eternally applicable truths, can not be outgrown by any course of progression, no matter how vast in extent or protracted in duration. Let us illustrate: In their attempts to develop the various sciences, men at first observed phenomena and recorded their observations. They speculated concerning the reason of phenomena, and suggested hypotheses or guesses concerning the cause and reason of the phenomena. Soon, phenomena were observed that did not accord with the hypothesis, and it was cast to one side, and another substituted. Thus men discarded theory after theory, as they outgrew them, until the great underlying principle, the great central truth, was discovered. Then all phenomena crystallized around this central truth into a system, and a science was arranged. These great central truths, these universal ideas, these underlying principles, man never outgrows. He may learn more of their scope and grasp, and the amplitude of their application, but he never outgrows them. Man will never outgrow the Copernican theory of the universe. He may learn more of its infinite application to the boundless systems of the universe, through systems of systems, to infinity, but he will never outgrow it. In like manner man will never outgrow the law of gravitation. He may learn more of its scope and infinite application in the boundless universe, but he will never progress beyond it. All man's subsequent progress will lead him through wider and wider ramifications, but it will never lead him beyond them, be his progress what it may. He can not outgrow universal truths.

The same generalization will apply to religion. Man can and has outgrown systems of negative commands, or positive statutory laws; but he can not outgrow a system of universal truth or general principles. A system of religion that makes absolute and eternal the catholic and cardinal religious ideas, God and his attributes, creation and government by Him, spiritual life and existences, good and evil, right and wrong, responsibility and accountability, reward and punishment, providence, prayer, and answer to prayer, revelation, inspiration, prophecy, miracle, sacrifice, atonement, expiation, mediation, personal leader, embodiment and exponent of doctrine in religion, object of faith, devotion and love, will be universal and eternal. An incarnation will make these ideas infinite and eternal.

If this religion contains a perfect system of reformation of life, or spiritual regeneration, and forgiveness of sin, and a perfect system of absolute truth to be believed, veneration, praise and worship, for a perfect object of worship, and a perfect rule for life, and complete organization and ordinances, susceptible of universal application, it can not be outgrown by progress. Man may learn more of the scope and grasp of these universal principles, and learn to apply them better to his progress and advancement, but he will never outgrow them, any more than he will the universal and eternal in science. Then the question concerning Christianity, or any system of religion, is: Is it a system of universal and eternal truths? Are its principles susceptible of universal and eternal application? If this be the case, it can not be outgrown.

Did space permit, the author would apply these general hints to Christianity, and elaborate them more fully. Should the present work meet with a reception that encourages him to believe that good can be accomplished by his efforts, he will follow this work with another one, in which he will develop what is merely suggested here. In it will be discussed more fully than was possible in this book: What was man's primitive condition? Does man need a revealed religion? What should be its basic ideas? How should it be given and developed? Is Christianity, in its basic ideas, the religion man needs? Has it been given to man as his needs and nature demanded? What has Christianity done for man? Can man outgrow Christianity? etc. These and kindred topics will be discussed.

There is a line of thought that never has been presented in a connected view that forms one of the strongest defenses that can be made for the religion of Christ. With the hope that he has been instrumental in leading the reader to an apprehension of infinite and eternal truth, and a prayer that all may be made free by the truth, he bids all farewell.

APPENDIX.

Tyndall's Statement of the Evolution Hypothesis.

We can not resist asking Tyndall, since he has avowed his inclination to recognize in matter all possibilities of being, and his inclination to accept the stupendous hypothesis expressed in the quotation from him: How came all these existences to which he refers, if once latent, to be changed into the potential? What changed what was merely latent into the potential? What changes what is potential into the actual? Accepting so stupendous an assumption does not relieve, but rather increases the difficulty that is still to be surmounted.

Anthropomorphism of Scientists.

One of the charges made by evolutionists against the theory of creation, is that it anthropomorphizes the Infinite Cause, or Source of all things. The objectionable anthropomorphism is not in the theory of creation, but in their caricature of it. A favorite subterfuge is to speak of the theory of creation, as though it necessarily subjected Infinite Reason and its acts to all the limitations, ignorance and imperfections of finite reason. Man has to search for truth and ideas, and to compare them, in his reasoning, and to study out the end that is most desirable, and the plan that will best accomplish it, and the best means to be used. He often blunders and fails, and has to contrive and toil to remedy it, and is a mere shaper or tinker, and not a maker or creator. It is tacitly assumed, by these objectors to the theory of creation, that Infinite Reason is subject to the same limitations and imperfections. Creation is not in accordance with law, and can not be made to accord with true scientific ideas. Government and providence by the Creator are in violation of all law and scientific order. They are an after thought of an intelligence that failed in the first effort, and an attempt to patch up a mistake. Teleology implies studying and contriving and tinkering of processes, to meet ends that have to be studied out, and toiled for, by effort. In this way an attempt is made to load down the idea of creation by reason, government by the Creator, and providence with absurdities that will break it down and destroy it. It is a most unfair and unjust perversion of the idea.

A child who does not know the alphabet, and who wants to read a book, has to learn laboriously the alphabet, what sounds the letters represent, how to combine the sounds into syllables, and the syllables into words, and words into sentences. He has to learn the various meanings and uses of words, and by comparison determine the particular meaning each word has in each case of its use, and by uniting these meanings he reaches the thought, and by combining thoughts he reaches his end or object. Huxley glances over the page, and nearly all the processes that the child went through so laboriously he omits entirely. Others he performs immediately or intuitively, and unconsciously to himself. It would be gross folly to say that because the child reaches the thought so laboriously, Huxley must. And it is a still more gross absurdity to assume that Infinite Reason must be subject to the limitations and imperfections of finite reason. Infinite Reason knows immediately and absolutely, and acts accordingly. In teleology in nature, Infinite Reason uses perfect means to accomplish, infallibly, the end, with absolute knowledge, and without any imperfection. It is in accordance with law, the highest law, law of Infinite Reason. Because ends are accomplished by means in creation, it does not follow that there is the studying, contriving and laborious thought there is in man's works. It is done infallibly, with perfect and immediate knowledge, and in accordance with the highest law, law of absolute reason. So also government and providence are a necessary part of the highest law, law of government by intelligence over intelligences. They are a part of its perfection, and necessary to its perfection, and not a patching of a failure.

Objections to Nebular Hypothesis.

As the author has been criticised as almost insolent, and certainly audacious in venturing to question the nebular hypothesis, he will restate his reasons: I. It is but a hypothesis, a guess. II. We have not any knowledge of matter in its primordial constitution, or initial condition, in a nebulous condition. We have no knowledge of matter changed by heat or any other process of nature, or held by any process of nature, in a gaseous condition, or fire-mist, for any length of time. Indeed, we have no knowledge of solids produced by any process of nature from what was primordially a gas. Our experience is just the contrary. Gases are produced from solids. III. There is assumed as known, what is unknown, and can not, from the nature of the question, be known. It is not known, and can not be known, that our solar system was once a nebulous cloud, or cloud of fiery vapor. IV. The assumption involves the impossible, contradictory and absurd. If all absolute space was pervaded by this fire-mist, where was the heat radiated to when it was cooling? If but a portion, what held this repellent mass in that portion of space? Why was not the heat all radiated and the mass absolutely cold and remain so during eternity? When applied to the formation of our earth, it is, as we have shown, a mass of absurdities. It contradicts known facts. It is inconsistent with the idea of the properties of the elementary substances, and chemical affinity, and the idea of life ever appearing on our planet. It contradicts clear laws of mechanical pressure, and repellent force of such repellent mass, and many other absurdities already enumerated elsewhere. For these reasons the author will at least venture to question this nebular hypothesis, or cloudy guess.

The Propaganda of Atheistic Scientists.

While no one will object to freedom of speech and thought, or to the atheist and other unbelievers advocating and disseminating their sentiments in a proper manner, yet certain things are practiced that are, at least, questionable as matters of taste and propriety, and of doubtful honesty. We have so-called scientific associations and societies; we have scientific lecturers and lectures; scientific authors and books; sciėntific series; scientific papers and journals; we have also literary journals and writers and lectures; we have political papers and authors also. No one doubts that so all-pervading an influence as religion, has its bearings on science, literature and politics, and that each of these has its relations to religion. These bearings and relations should be carefully studied and honestly and fearlessly stated. But one can scarcely see the necessity for officers and lecturers, before scientific associations, going clear out of their way to make attacks on religion, or make flings at it. Nor for their pursuing such a course to such an extent that scientific associations are almost synonyms in the public minds with infidel propaganda. One can see no necessity for Tyndall and Huxley and others availing themselves of the *eclat* of an annual presidential address to assail religion. One can see no necessity for a paper, claiming to be scientific, going clear out of its way to make an attack on religion, as was done by the only weekly that arrogates to itself the term "Scientific." Nor for the continued tone of sneers and insults there are in some of our large dailies, whenever religion is referred to. A preacher is a "gospel slinger," and a church a "gospel shop," in the low slang of one of these corrupters of public morals and taste. Then the cardinal ideas of religion are openly assailed or covertly sneered at in nearly every number. The worst disseminators of infidelity to-day are some of the leading dailies of our leading cities, and a majority of them can be included in the list. The same is true, to some extent, of several of our literary papers and magazines. The cardinal ideas of Christianity are assailed, ridiculed and caricatured in story and editorial and the heavier articles. Several of our literary writers never speak of religion, but to stab it. One well known writer never has a villain in his stories, but he is a priest or church officer, or noted member. His heroes are unbelievers. Religion always figures as cant and hypocrisy on his pages. He is a type of a large class.

We have a large class of lecturers, literary, scientific and nondescript. Many use the advantage thus given, to openly assail or covertly ridicule or caricature religion, and disseminate infidelity. We have magazines calling themselves popularly scientific, that are fanatical and bigoted propagandists of infidelity. We have international series of books called scientific, that are atheistic and bigotedly infidel. We are not questioning the right of these persons to entertain such sentiments, or to disseminate them, but we do question the taste and propriety, and the *honesty* of the way in which it is done. When an association professes to be scientific, let it be such. If it is an infidel propaganda, let it avow what it is. Infidelity and science are not synonymous, nor is religion an enemy to science. A man can be scientific in the truest and broadest sense, and not assail religion, and indeed be religious, as thousands of the best scientists are examples. If lecturers and officers of such associations wish to assail religion, let them call their effort by its right name, and not steal the livery of science to serve infidelity. If Proctor is to lecture on astronomy, let him do so, and not step away out to one side and wander off to deceive and insult his audience by a rehash of Paine's stale objections to the xxiv. chapter of Numbers. If the editors of a scientific journal or a medical journal want to assail religion, let them honestly publish an infidel paper, and not do as several of these have done, get patronage under the garb of medicine or science, and then peddle infidelity under such license. When we buy a daily newspaper or a political journal, we do not want to be compelled to load our tables with, and place before our families the baldest infidelity, and slang and blackguardism, in connection with the news we supposed we were purchasing. Let such men sail under their true colors, and tell us what they have for us when they offer their wares. A gentleman once had placed before him a dish of pickled pears. On looking carefully into it, he detected a drowned mouse. Calling his hostess to him, he said, "Madam, I know that pickled pears are good. Pickled mice may be as good, or far better. They may be according to your taste. I am not questioning the fact, or the accuracy of your taste. But as a matter of personal right, I must be allowed to exercise my own taste, when it comes to my own eating. I prefer to have pickled mice and pickled pears served in separate dishes. Then I am allowed to exercise my undoubted right to choose what I will eat." So we say to these parties. We know that science, politics, literature and art are good. We know that books, lectures and papers that are really scientific or literary or political are good. Infidelity may be good. It may be the most excellent of all things, according to their taste. We question neither the taste nor the excellence of what *they* love. But as a matter of personal right on our part, and honesty on theirs, we insist that they serve them to us in different dishes, and each under its right name. There is impudence in the cool, monopoly of science, and the terms science, and scientific, by such associations, publications and men. Some of our best scientists entertain no such views, but the opposite. There are at least two sides to the question. If they must use the terms, let them prefix the proper adjectives, and call themselves atheistic scientific associations, papers, lecturers, books or series. This would be honest, modest and true, and their present course is neither. It is especially arrogant, when we remember that the favorite hobbies of such men are theories at best, guesses, hypotheses in reality. Then there is a narrow-minded bigotry and fanaticism among scientists, as great as ever characterized any religious bigot. The fanatical zeal with which Youmans or Fiske will defend any thing connected with these hobbies, the indignation they display towards one who dares to question them, the sneers of Huxley and others, in speaking of religion and religious persons, is the same heat that kindled in the opposite party the fires that burned Bruno and Servetus. It is fashionable now to sneer at priests and preaching, and to sneer at the idea of their ever having done any good, and at sermons and the literature of priests. The rostrum and lecture are to take the place of pulpit and sermon. The intelligence of priests, and their education and their place in history, will compare with that of any class of men. Their themes, religion, morality and righteousness, are the highest men have ever investigated. Their books and sermons, in talent, usefulness and importance, sustain the same relation to literature that their themes do to thought. Every Sunday, all over Christendom, hundreds of thousands of men, embracing a large portion of the talented and educated of this generation, are presenting, for the consideration of men, the most important and exalted themes of human thought. This has been the case for many hundred years. The work of the rostrum now set up as a rival, is now, and ever will be, but as a drop to the ocean in importance and influence.

When we look at the history of the world we find that struggles for religious freedom were headed by believers and readers of the Bible, during all modern times. Political and mental freedom have been the results of such struggles, and not its cause. The history of Switzerland, Germany, France, Holland, England and the United States provesthis. We owe to the Protestant Reformation, and not to infidelity, our freedom, progress and civilization. We close this thought by calling attention to the covert hostility to religion displayed in what are called popular science primers. In some, atheism is boldly presented as science. In others, religion is covertly caricatured or sneered at. In all there is a careful ignoring of all idea of intelligence in the cause or control of the phenomena presented. Matter and force, natural forces and laws, are studiously presented as the only cause, and all-sufficient cause. If there is not an attempt to disprove all connection of intelligence with the phenomena, a careful effort is made to show that matter and force are sufficient, and no intelligence is needed in the cause. The reader is led up face to face with the forces of nature and left in intended atheism. If there is recognition of creation, or intelligence in the origin or control of phenomena, by the author, contrary to the expectations of the projectors of the series, as was the case in Quatrefages' "*Ethnology*," the master-spirit must administer the corrective in an atheistic appendix, as was done in that case. It is time the world demolished this Trojan horse, and compelled the knavish Greeks concealed in it to fight in the open field under their true colors.

Is the God-Idea an Intuition?

If we use the term God-idea in the sense of a tendency to worship something, an aspiration and desire for a superior being or beings, a recognition in worship, aspirations and tendency of such superior being, it is a primary intuition. If we use the term as including a formulated theory of creation, government and worship, it is not a primary intuition, but the result of a course of reasoning. It is an universal affirmation of reason, and an intuition in only the secondary sense, a catholic or universal idea.

If we use the term intuition in the sense of an universal, catholic idea of reason, the God-idea is an intuition, both in the sense of an aspiration or tendency to worship, and of a formal theory of creation, government and worship, as man's superstitions and religions prove.

If we use the term intuition in the primary sense of a primary or immediate intuition, then the idea of God is an intuition only in the sense of a tendency to worship, an aspiration toward a superior being, and the recognition, it may be vague and indefinite, of the existence of such being.

But if by the term God we mean a perfect and correct idea of his nature and character, especially of his moral attributes, it must be the result of revelation. It is in this sense that the religious world use the term God, when they say the God-idea must be revealed.

If the persons who dispute so much over this, would define clearly what they mean by intuition, and the God-idea, there would be but little controversy. The dispute is the result of using words in entirely different senses.

Involution must always precede Evolution to render Evolution Possible.

The writer has, in various ways, endeavored to arrange before the reader the fallacies of the evolutionist. He begins by evading, as much as he can, of the difficulty to be met. He quietly ignores much, and generally the essential part. He leads the mind back over a long course of investigation to a choatic, nebulous beginning, and assumes all that his theory requires, and in the confusion of the reader or hearer this is unnoticed. He quietly deposits in these crudities, matter and force, all he wants to draw out of them. Or he confuses the mind with a multitude of strange phenomena, and assumes that they cover all the elements of the problem, and assumes that his speculations on them, which are largely assumptions, unwarranted by the phenomena, explain the entire case. Or he begins and furtively and illicitly steals, grain by grain, during an almost infinite time, the whole chain of causation, all he needs, and foists it quietly and furtively into the course of nature, as his necessities demand. In either case there is a confession that mere matter and force and their essential properties are not a sufficient basis for the evolution he claims. We have endeavored to show that to these conceptions other things must be added. There must be deposited in them other elements. The elementary substances and their characteristics must be there. These, and the essential properties of matter and force, must be co-ordinated. Chemical affinity and its laws and their co-ordination must be there. There must be wrought out in all this the most exalted ideas of reason. Life must be deposited, and life must appropriate the matter of the cell or germ, and co-ordinate and subordinate physical force. All this is an involution, and not an evolution. The greater portion of what is called evolution is involution, and must precede evolution to render evolution possible. From the rudimental conception of matter and force, until we reach the vegetable and animal germs, and until the germ is ready for development, the process is involution. If we concede the efficiency of the conditions that the evolutionist claims produce his evolution, these conditions must be deposited in matter and force, and the arrangement of matter and force into these conditions is an involution. The evolution is only seen in the development of each individual plant or animai, and in the development of varieties out of species; or of species out of the primordial forms, if we concede the latter to be true. Then nearly the entire process is an involution, and this involution must precede the evolution, before the evolution can be possible; and the involution must be planned, conducted and controlled by intelligence. Intelligence alone can involve the factors of the evolution, and conduct and control such a process of involution after it has planned it. Then a radical fallacy of the evolutionist is, calling the entire process an evolution, when nearly all of it is an involution. Another is to overlook the fact that this involution must precede the evolution to render it possible, and the fallacy of fallacies is to overlook the truth that this involution must be devised by intelligence, controlled by intelligence, and conducted up to the point of evolution by intelligence.

Three Ways of getting rid of the Idea of Intelligence in the Cause of Evolution.

I. Leading the mind back to so chaotic a conception of matter and force as to confuse it, and then either boldly assume or deposit in them all that is to be evolved out of them, or take refuge in the unknowable, and deposit in this myth all that is needed to produce the evolution. II. Confuse and dazzle the mind with what nature can do, assuming that nature can do all this without any relation to intelligence. III. Show what nature does in one particular, and then spread that over the universe as an explanation of all existence and phenomena. Tyndall and Spencer pursue the first method. Tyndall boldly assumes and deposits in matter all he wants to draw out of it. Spencer takes refuge in that phantom, the unknowable, and places in it all he wants as ground for phenomena, but intelligence. That he rejects in violation of all reason. Darwin pursues the second method. Huxley, in his late demonstration, pursued the third method.

Reasons why certain Tribes have been Pronounced Atheists.

I. Persons making inquiry have been so ignorant of the language of the tribes, that querist and the one answering did not understand each other. II. Or they presented theological speculations concerning God, and because the persons were ignorant of such ideas, pronounced them atheists. III. Or they confounded ignorance of the one God, or the God of revelation, with atheism, or ignorance of all objects of worship. This is the principal cause of these tribes being called atheists. IV. Or the savage merely understood by the God inquired after, the deity of the tribe of the inquirer. When he said he knew nothing of the God of the querist, the latter understood it as ignorance of all object of worship; when the savage had, perhaps, an elaborate system of worship. V. Or their religion was destitute of certain elements found in most religions. Perhaps it had no temples, or no priesthood, or acts of worship like prayer or praise. VI. Or their superstition would not allow them to name or talk of their gods. Every atheistic tribe (supposed to be so) has been found to have superstition, and that the mistake arose from one of these causes.

Another Subterfuge of Evolutionists.

It is a very common thing with the evolutionist, when an objection is urged to any position of his theory, to retort dogmatically that evolution does not teach or involve what is objected to, and often the objector is taunted with not understanding what he is talking about, and impudently told that he had better study and understand evolution before he ventures to urge objections to it. As this is never followed by a statement of what *is* the teaching of evolution, the retort is but an uncourteous evasion. Huxley wonders at the marvelous flexibility of the Hebrew text that admits of so many and so different interpretations. Students of evolution have far more reason to marvel at the wonderful flexibility of the unerring, inflexible records of nature, as they are called by the scientist, when each one presents a different interpretation, and often many and conflicting interpretations in his own writings or lectures, and each and all of them can, as necessity demands, be rejected as not being the teaching of this inflexible record, though they were presented as such. The interpreter of the Hebrew text, not only denies the interpretations that he opposes, but he is courteous and honest enough to present what he thinks is the real interpretation. In this, he is more courteous, honest, and courageous than the evolutionist. Let persons criticising evolution meet this discourteous evasion, by demanding what is the real teaching of evolution, and the evasion can soon be exposed. The author insists as due to truth, and demanded by courtesy and honesty, that critics condemning any statement in this book, as not a fair statement of evolution, not only deny, but state what is the teaching of evolution.

Matter and Force not Self-existent, but the Creations of Mind.

The issue between the theist and the atheist can be presented thus: There are existences, mineral, vegetable, animal, and rational, now in being. They did not cause themselves, but have a derived existence. Then as "*Ex nihilo nihil fit*—Out of nothing, nothing comes," something must have existed forever as their cause, or source of their being. Either a series of existences such as we have now, extends back eternally, or something existed before the series of existences now in being came into being, as their cause. Every thing that exists now, is finite, conditioned, contingent, dependent, and perishable. Nothing that we see, caused itself. The finite, the contingent, the conditioned, the dependent, the perishable can not be self-existent, independent, eternal, and self-sustaining. Nor can an infinite series of such existences. Such a series would be an absurdity, and impossible. Nor can an infinite number of such existences. If these properties of self-existence, independence, and self-sustenance be not in the individual existences, no aggregation can evolve out of them what is not in them. "*Ex nihilo nihil fit.*" Then something self-existent, independent, and self-sustaining must have eternally existed as the origin of all that exists, or there must be something absolute, uncaused, unconditioned, and necessary, that has eternally existed as the ground and source of the finite, conditioned, dependent, contingent, and perishable that exists. The issue between theist and atheist is; What is the necessary, absolute, uncaused, unconditioned being or substance? What is it that is the self-existent, independent, self-sustaining and eternal? What is the ground, source, origin, or cause of all existences and phenomena? This is the problem of problems, that determines all systems of science, philosophy, and thought. The theist affirms that absolute intelligence, or mind, or spirit, is the absolute, the unconditioned, the uncaused, the necessary being; that mind or spirit alone is self-existent, independent, self-sustaining, and eternal. The atheist, to have an adequate basis for existences, and phenomena, and for evolution, if he be an advocate of evolution, must affirm that matter and force, blind, irrational, insensate matter and force, are self-existent, independent, self-sustaining and eternal—that blind, irrational, insensate matter and force are the unconditioned, the absolute, the uncaused, and necessary, and the ground and origin of all existences and phenomena. Also that the essential properties of matter and force, are eternally inherent in them. Also that the original elementary substances of matter are self-existent, eternal, independent, and self sustaining, and that their essential characteristics are so; and that the laws of nature, of which he speaks, are self-existent, independent, eternal, and self-sustaining. Then by the action, interaction, and reaction of these elementary substances and their characteristics, and of matter and force, and their essential properties on each other, in accordance with these laws, all existences come into being. It is a common course of the evolutionist to begin and go back, through rational, animal, vegetable, and chemically arranged matter, to mere matter and force without these. The mind has become bewildered by the long course, and confused by the chaotic cloudy things called matter and force, presented for its consideration, and like one in the dark in a haunted house, is ready to believe and accept almost any thing. Tyndall asserts we have in these nebulous nondescripts the potencies of all being. Spencer confuses the mind with sonorous phrases, such as heterogeneity and homogeneity, differentiation and integration, etc., and conjures a universe into being with these cabalistic words.

Let us, however, pause and look carefully around us, and inquire whether there is not bald assumption, and assumption in contradiction to all reason in the starting point of the evolutionist, in this primeval fog of nebula, or star-dust, or fire-mist, or whatever he choses to call it. The atheist must prove: I. That blind, irrational, insensate matter and force can be self-existent, independent, self-sustaining and eternal. II. Prove that they actually and beyond a doubt are so. III. Prove that even if they are self-existent, independent, self-sustaining and eternal, they can be the origin and source of all existences and phenomena. IV. Prove that they are really and beyond doubt the origin and source of all existences and phenomena. It will not do, as is generally done, to assume that they are self-existent, independent and self-sustaining, for that is assuming the point at issue. Nor that they can be, or may be, for neither is sufficient basis for reasoning, and both are denied. Nor even if they are self-existent, independent and self-sustaining, that they are the source of all that exists, for that is the real issue that is contested. The atheistic evolutionist must demonstrate that matter and force, their essential properties, the elementary substances of matter, and their characteristics, and what he calls the laws of nature, are undoubtedly and actually self-existent, independent, self-sustaining and eternal, and that they actually and undoubtedly are the source of all that exists. An attempt to prove that matter and force are self-existent, independent, eternal and self-sustaining, is sometimes made thus: I. He assumes they are indestructible. II. Then they will have no end of existence. III. As they will have no end of existence, they can have had no beginning, or they are eternal and self-existent? To this the reply is easy: I. He does not know that they are absolutely indestructible. He only knows that he can not destroy them. Can he prove that higher intelligence can not destroy them? II. Infinite Intelligent Power could make them indestructible by any power except himself. III. Because Infinite Intelligence made them indestructible by any power except himself, and because he permits them to exist for ever, does not prove they are self-existent. IV. Even if they were indestructible, it does not follow that they had no beginning, and are self-existent.

The reply of the theist to the position that matter and force are self-existent, independent, self-sustaining and eternal, is: I. Matter and force (unless we include in the term force mind-force) can not from their very nature and constitution be self-existent, independent, self-sustaining and eternal. II. Matter and force are subordinate agents, subordinate to mind, and created articles, the creations of mind. III. Blind, irrational, insensate matter and force can not be the source and ground of all the existence and phenomena that exist. Even if we concede that matter and force and their essential properties, and the original elementary substances, and their characteristics are self-existent, independent, self-sustaining and eternal, we have no basis or source of the evolution claimed by the evolutionist. Blind, irrational, insensate matter and force and their physical, irrational, essential properties, and the elementary substances of matter, and their physical, irrational characteristics, could not originate, start or control the evolution claimed by the evolutionist, and bring into being the existences and phenomena now in existence.

I. Matter is not self-existent and eternal—does not have necessary being. If we take the latest results of scientific research, and pass back to what it places before us as its elementary idea of matter, to its primordial constitution, its primordial molecules, they are of definite size and shape, and have definite characteristics. We can easily conceive how all this could be different. Hence, it is not necessary and eternal, or self-existent. Hence, the primordial molecular constitution of matter, matter in its primordial constitution, does not have necessary being, and is not self-existent. II. Matter, in its primordial constitution, has a definite number of elementary substances. These have definite characteristics. Each has peculiar and definite properties. Each has peculiar and definite affinities. These elementary substances, essential properties of matter, and peculiar characteristics of each substance, and its affinities, are arranged in exact mathematical proportions and law. All this can be conceived of as being different from what it is. Hence it is not necessary and self-existent. Then matter in its primordial constitution has not necessary being, and is not self-existent. If it be claimed that this is not the primordial constitution of matter, will any one tell us what was back of it? What could be back of it? How could matter exist, or be thought of, without these characteristics here enumerated? Will he describe it to us? Can he think of it without these characteristics? And if it did exist without them in its primordial constitution, whence came they when they did appear? The same holds true of force and its properties. They are in its primordial condition, co-ordinated and adjusted, and act in accordance with exact mathematical law in all respects. We can easily conceive of a different arrangement. Hence this is not necessary and self-existent. If it be objected that this is not the primordial constitution of force, will the objector tell what it was? How could force exist, or how can we think of it without such co-ordination? The present co-ordination is the *only one* that accords with reason, and the one reason would give, but others are conceivable, and fortuity, which must have controlled, if there was no reason, could have given them. The one in accordance with reason obtains in the primordial constitution of force, and of matter also; hence it is not self-existent.

II. Matter and force are subordinate agents, subordinate to mind, created articles, the creation of mind. The most rudimental or elementary idea of matter that science can give us, places it before us in its molecular constitution, and shows that its primordial molecules have definite size, shape, and characteristics. This is not self-existent and necessary. It has been derived from some source back of it. There are co-ordination, plan, method, system, and law in it. These have their only conceivable, thinkable ground in mind. Then mind was back of this primordial constitution of matter, and gave to it this first constitution, or absolute beginning. Matter is a subordinate agent, subordinate to mind, a created article, the creation of mind. In its primordial constitution matter has essential properties. These are co-ordinated in plan and by law. It has elementary substances. These are co-ordinated and arranged in accordance with mathematical proportion and law. These elementary substances have their peculiar characteristics. These express idea or thought. They are co-ordinated and arranged in system, method, and law. This is not necessary. We can conceive of a different arrangement. It is not self-existent. But there are realized in this primordial constitution some of the highest ideas of reason. It is in accordance with them. Fortuity of blind matter and force could not realize these ideas of reason in co-ordination, arrangement, adaptation, adjustment, law, method, system, and plan. Then matter is not self-existent or the result of fortuity in its primordial constitution. It is the creation of reason, realizing in its absolute primordial constitution ideas of reason.

In the primordial constitution of force, its properties or characteristics are co-ordinated, arranged in method, system, and law in all respects—how, when, where, how long, how often, with what energy, in what order of succession, with what rapidity it acts. In this are realized some of the most exalted ideas of reason, the most abstract ideas of pure reason. This is not self-existent, nor the result of fortuity. It is the result of reason that was back of the primordial constitution of force, and realized these ideas in such absolutely primordial constitution. Hence force is a created product, the creation of mind. If it be objected that this is not the primordial constitution of matter and force, let the objector tell us what was back of it? What *was* the primordial constitution of matter and force? How could matter and force exist without these things? Where did they come from when they appeared, for they are now in being? Then we present to the materialist this dilemma. In his most rudimental, his initial conception of matter and force and their essential properties, there are realized ideas of reason. He can not think of matter and force without these ideas of reason. Then in his initial idea of matter and force in their absolutely primordial constitution, there must be realized ideas of reason. Or if he eliminates these ideas of reason, he renders matter and force unthinkable, and removes them out of being. To get rid of reason and ideas of reason, in the primordial constitution of matter and force, the materialist has to remove matter and force beyond thought and out of being, and reduce the universe to nonentity, and begin with nothing. The moment he brings matter and force into thought or being, he brings with them ideas of reason, that prove that they emanated from reason. Hence reason must be back of matter and force to give them being and render their existence thinkable or possible.

Even if we concede the self-existence of blind matter and force, and their irrational physical properties, and of the essential elements of matter and their irrational physical characteristics, we have no adequate origin of the evolution claimed by the evolutionists. We have no adequate control of the course of evolution or the present order of things. We must place in the absolute beginning and primordial constitution co-ordination, adjustment, arrangement, order, system, method, law, plan, or we can have no start, no course, no result of evolution. Disorder can not evolve order. Unadjustment can not evolve adjustment. Absence of co-ordination can not evolve co-ordination. Unadaptation or fortuity can not evolve adaptation. Absence of method can not evolve method and system. Confusion can not evolve order and law. Aimless fortuity can not evolve plan. Chaos can not evolve law, plan, purpose, order, and system. So declares common sense. It is an insult to common sense to suggest such a thought; and yet this is the fundamental idea of atheistic evolution. To make evolution and development even thinkable, we must have in the absolutely primordial constitution of matter and force, in the course of evolution and in the present order of things, realized those most exalted ideas of reason, co-ordination, order, method, system, law and plan. It is an insult to reason to suggest such development, if such is not the case. It is an insult to reason to suggest such realization of these ideas unless reason be back of such primordial constitution to realize them. Then to get rid of intelligence as the ground of evolution, the atheist has to strip matter and force in their constitution of every thing that renders evolution thinkable. And to have evolution he has to place in the absolute primordial constitution of matter and force, characteristics that have their only thinkable ground in mind. He insults reason if he assumes that these characteristics have any other ground than reason.

There are only three conceivable methods of operation of matter and force and their properties. Chance or fortuity. Fate or blind necessity. Or under control of mind. The atheist talks of order, system, method and law, order of evolution, law of development, or of nature, method of nature. He is grossly inconsistent, and has no right to use one of these terms. To get rid of intelligence, he empties the course of matter and force of all idea of purpose, end or plan, all ideas of intelligence in control of it. All unitizing ideas of reason, all connecting links of thought are *rejected* as being realized in nature. We have the aimless *fortuity of the* grapeshot, in the operation of the essential properties of matter and force, and the peculiar properties of elementary substances, and chemical action, the actions of organs, and all nature. To have evolution and progress or development, there must be a change, hence these factors can not be controlled by fate, or they would always produce the same necessitated result. Evolution under fate, or blind undeviating necessity, is an absurdity. Then to get evolution, we must discard this idea, and have change. If there is no control of reason, the blind factors produce only chance, fortuity, aimless fortuity. It is absurd to talk of evolution and development and progress by the aimless ongoings of fortuity of blind matter and force. Not only so, but what right has the evolutionist to use the terms law, order, method, system in such a grapeshot series? How can there be creation by law, evolution by law, or in accordance with law of nature, order of nature, in such a grapeshot series of *happenstances?* All talk of law, order, system, method or of evolution or development or progress is an insult to common sense. The evolutionist empties the course of matter and force of all action or idea of intelligence, and then deliberately steals from the operations of intelligence every term he uses in his system. The terms he uses and applies to his evolution are only possible in the action of mind. If there be not mind and reason back of matter and force, and controlling these ongoings, if these ongoings be grapeshot fortuities, all talk of law, order, law of evolution, law of nature, order of nature, creation by law, evolution by law, is absurd. To render evolution thinkable there must be co-ordination, arrangement, method, system, order, plan and law. All talk of evolution without these ideas is folly. All talk of them with the blind, aimless, fortuitous ongoings of mere matter and force, asserted by the evolutionist, is folly. Alternativity, choice and freedom under law, are all that can be allowed and have evolution. Grapeshot fortuity is preposterous as a basis for evolution. Co-ordination, arrangement, order, law, plan are absurdities, except as they are based in reason, and are the results and acts of reason. The evolutionist, then, has no right to the use of these words, and they have no place or connection in his system.

It is time that this was understood. It is a trick of scientists to speak of all idea of creation and miracle, providence and all religious ideas, as though they were in violation of all law, and a setting to one side of law, or at least capricious and lawless. The issue between evolution and creation, government and providence, by a Creator, is not an issue between law and violation of law, or law and lack of law; but a question as to what kind of law. If atheistic evolution be true, if matter and force be the origin of all things, there can be law only in the lower sense of a uniform course of acting, and this must be undeviating fate or necessity, and if so no evolution. If change be possible, as it must be, to give evolution, there can be nothing but aimless fortuity, if there be but matter and force, and no law at all, not even in the lowest sense of an uniform mode of acting. It is only when all things have their origin in and are governed by intelligence, that there can be law, even in the lowest sense, and it is only in such cases that law is possible in its true sense, a determination of the end to be reached, and the methods of reaching it. Creation and government by Creator and providence are in accordance with law, the highest and truest law, law of perfect reason. God creates and governs and exercises providential care over his works, in accordance with law, the highest law, a law of infinite perfect reason. Then it is the atheist who violates all law in his system, and has no law, but aimless chance, and no basis for law, and no possible place for law, not even the law of capricious intelligence. We return to him the charge of having a system without law, if true to his system. If he uses the terms law, order, method system or plan, he purloins them from the very system that he assails as destitute of law. The evolutionist makes what he calls law depend on generalization of phenomena. If his system of aimless fortuity be true there can be no generalization and no law, as an expression of such generalization. Generalization results from the operation of law. Evolutionists makes the principle depend on the process, when process results from operation of principle. Law reveals the principle that determines and regulates the process. Law is found by generalized observation and not created by it. Evolutionists reverses the true process.

The Source of all Existences and Phenomena Unknowable.

The former position of the atheist, that matter and force are self-existent and the source of all being, has been so thoroughly exploded that a new evasion is now resorted to by these advanced thinkers. It is admitted that matter and force are themselves phenomena, and not the source of being. As they are phenomena there must be a noumenon, or that which is their source. Spencer says to talk of appearances without a something, a reality that appears, is absurd. But determined not to admit the existence of a God, or an intelligent source of all being, it is asserted that the source of all things is unknown and unknowable. The query arises, If it is unknown and unknowable, how do these thinkers know anthing of it? How do they know that back of phenomena there is such a power? How do they have any conception of it? How do they know enough about it to know that it is unknowable? How do they have sufficient conception of it, if it is unknown and unknowable, to have the idea or conception that it is unknowable or even exists? In the affirmation it is assumed that the affirmant knows that this power exists, and knows that it is unknown, and knows that it can not be known, and knows a great deal about it, for he knows enough to give many things connected with it that make it unknowable. This evasion is expressed in various ways: I. We have not sufficient data connected with this power to know any thing about it. Above all, and that is the real object of the evasion, we have not sufficient data to affirm that it is intelligence. II. We can have no knowledge, not even an apprehension, of the infinite. As this unknown power is infinite we can have absolutely no knowledge, not even an apprehension of it. III. The term God is but a term giving a name to something of which we know nothing, but wish to talk about. It is a phrase, a phrase used for convenience, but expressing no idea or knowledge of ours, but rather a symbol representing the unknowable, like the letter X, in an indeterminate equation. It represents something of which we have no knowledge, and have no means of knowledge. If a personification, it is but a term personifying our ignorance. IV. Or if we do make a person of this power, we are personifying it in ignorance and weakness, just as the child personifies and must personify every thing that affects him, or causes the phenomena he observes. V. Or in making a person of this power we merely project ourselves into nature and worship ourselves. VI. Or we make this power in our own likeness. We make God in our own image. Is it the case that we have not sufficient data to determine the nature, characteristics and qualities of this power? Can not we tell from the phenomena produced by this power, its nature, character, and qualities? Inductive philosophy is at an end if we can not, for it is based on that principle. Can not we tell from what proceeds from this source, the nature of the source? If not, all search for knowledge is a chimera, and knowledge a delusion. Let us take a familiar illustration. I have before me a book regarded as one of the master-pieces of human genius, the Illiad. I trace it back through translation and copy, versions and commentaries, until the time of Pisistratus. I learn that, for at least four hundred years before that, it existed in oral tradition. I can not learn its exact epoch. I can not learn who was its author. We do not know whether it had one author or several. We do not know whether Homer was the author or not, or even whether such a person as Homer ever lived. We do not know when the author lived, or where he lived. Certainly, if ever there was a case of the unknown and the unknowable we have it in this case.

Suppose I say *Homer* is but a phrase or term giving a name to the unknown author. No one would seriously demur. But suppose I affirm that *Homer* is but a term for an unknown power, a letter X, a symbol for an indeterminate power. We do not know that the unknown power producing the poem was an intelligence. We have not sufficient data to prove that it was an intelligence. We can know nothing of the power producing the Iliad, except that it existed, and is unknown and unknowable. All would denounce such talk as nonsense. They would say: We know that it is, and must have been the creation of mind. We know from the character and nature of the work, the characteristics of the author. We know the attributes of his mind. He was the greatest poetic genius that ever lived. He is unrivaled in genius, power, sublimity and poetic grandeur. We can determine the nature of the cause, and the character of the cause, from the effect, his work. So in the case before us, we can determine the nature of the source or power from the phenomena produced by the power, from what proceeds from the source, and we can determine the attributes and character of the power, from the character of the effects or products of the power. If we can not, then all inductive philosophy, all knowledge, and search for knowledge, are a delusion. In the present constitution of things, that has been produced by this power—in the course of evolution culminating in the present order of things—in each step and the entire course emanating from this power, in the primordial constitution of things, in the absolute beginning of phenomena proceeding from this power, are realized some of the most exalted and abstract ideas of reason, order, co-ordination, arrangement, adjustment, adaptation, system, method, law, plan, prevision, provision, alternativity, choice, the most abstract and profound ideas of mathematics, in arithmetical proportion and number, and geometrical proportion and form, of beauty, utility and harmony. Then the present order of things, the course of evolution, the absolute beginning or primordial constitution of things, had their origin in reason that realized these ideas. The phenomena produced by this power are rational phenomena, the phenomena of reason, and the power producing the phenomena is reason. We know this just as certainly as we know that the Iliad was produced by intelligence. Then we can determine this symbol. We can learn the value of this X. The equation is not indeterminate. On one side we have the highest products of reason. On the other, we have reason as certainly as it is true that if $A=B$ and $B=C$, then $A=C$. The term God is not a personification of our ignorance, but the appellation of a power that we know to be personality, if we can know any thing at all. It is not a convenient term giving an appellation to something of which we must speak, but can know nothing, except that it exists; but it is a name for a being whose existence and character we know, if we know any thing, and given on account of such knowledge, expressing not ignorance but knowledge.

Nor is it true that our knowledge vanishes and becomes worthless or imaginary when we expand the idea to infinity. We can not comprehend the infinite, but we can apprehend it. We can not comprehend its quantity or degree, but we can apprehend its existence, and know its qualities. The objector does when he affirms we can not, for he apprehends its existence, and one quality, that it is unknowable, another, that it is unknown. And several qualities in his reasons why it is unknowable and unknown. One quality at least in each affirmation. The objector admits knowledge of the infinite in space and duration, and in being and causation in this power, the source of all things. He rises from the finite through the relatively infinite to the absolute in space, duration and being and causation in this power, that he declares is the source of all being. We can rise through finite displays of intelligence, through relatively infinite displays of intelligence, to absolute displays of intelligence in the same way, and to absolute intelligence. The objector denies it, not because there is any greater difficulty or any defect in the process, but because he is determined to reject Infinite Intelligence. In this evasion there is a juggling substitution of things entirely different, a juggling confusion of radically different ideas. A comprehension of quantity or degree, is substituted for, or confused with, an apprehension of quality or character. I stand before the Pacific Ocean. I can not comprehend its magnitude, either in numerical expression, or in sense effort to see it, or feel it all. But I should regard it as nonsense for one to declare, therefore I could not know and understand the properties of the water that was under my sight and power to investigate, and that I could not know that the infinite ocean possessed in infinite degree, what this portion possessed in finite degree. Such an assertion confounds comprehension of quantity or degree, with knowledge of quality or character. From what proceeds from a source we can determine the nature and character of the source, even if infinite. We know it is infinite in the same quality. If the phenomena proceeding from this power possess the characteristics of but one attribute, we know it has this attribute at least. We know it has all the attributes displayed by what proceeds from it, if it be true that we can determine the cause by the effect. If we can not, we may as well stop reasoning, the denial of reason and reasoning practiced by the atheists, with the rest.

We no more personify the power back of nature, when we make it an intelligence, as does the child personify the stone that hurts him, than the child when he reaches manhood personifies in a rhetorical sense, when he attributes his pain to the one who strikes him, and blames him for it, and regards him as an intelligence, and as responsible for it. He recognizes the intelligence and personality and responsibility that exist, and does not create them, in his mind. So we recognize the reason and personality that display themselves in nature. We do not create the personality and reason, by our imagination, or fancy personality when none exists. One is as clear a recognition of undoubted personality as the other. We no more project ourselves into the forces of nature, and worship our own image projected into nature, than the child projects himself into his father's conduct, and reveres and loves his own image projected into the conduct that he observes, and that causes his love. As the child observes real acts of another personality, and learns their character, and loves and esteems the personality that produced the conduct, on account of its character, so we observe, in nature, the acts of personality. We learn the character and nature of that person from the character of his acts. We worship that person on account of his character, as we learn it from his acts. We no more make God in our own likeness than the reader makes the author in his image, or the pupil the teacher, or the child his parent. The reader recognizes intelligence, and common qualities in the author, with his own, that really exist. So does the pupil in the teacher, the child in his parent. And so we recognize intelligence, and common attributes of intelligence in ourselves and our Creator. We do not fancy the acts of intelligence we see in nature, nor create by imagination or fancy the intelligence, that we say caused them. We see the acts of intelligence, because they are in nature the same as our own acts. They are acts that we know intelligence alone could have produced. We then know that intelligence produced these acts of intelligence. This course of reasoning of the atheist, if carried out, would deny all knowledge of any personality but our own, and all personality but our own. There is this much truth in it: We are apt to judge others by ourselves. Self-knowledge colors our knowledge of others. It is so in the case of the pupil, the child and the reader. They interpret, to some extent, the parent, the teacher and author, by themselves. Their mental bias affects the character of the effect the parent or teacher has on them, and their estimate of the character and acts of parent and teacher. But this does not prove that they can have no knowledge of parent or teacher, or of their character. Nor that they only see their own personality entirely in the supposed parent and teacher, and that the parent and teacher are unknown and unknowable. Nor that parent and teacher can not reveal themselves and ideas to the child, and correct its mistakes, and give a correct knowledge. It only demonstrates the necessity of such revelation and instruction, and of careful study by the child. The objection only proves the necessity of revelation, and not that we can have no knowledge of God.

The Application of the REDUCTIO AD ABSURDUM *to the Teleological Argument.*

The main reliance of the atheist now, in his attempts to meet the teleological argument, is what is called the *Reductio ad Absurdum* refutation. This is an attempt to extend the argument to the Creator it demonstrates, and thus break it down by showing that, if logically carried out, it leads to an absurdity. The ablest presentation of this famous reply to the design argument, is the tract of B. F. Underwood, the eminent atheistic lecturer and debater, on "*The Design Argument.*" By request the author here gives, by itself, his refutation of this attempt of Mr. Underwood. In applying the design argument to the Creator, he assumes that the cases are analogous, when they are not. There is analogy in certain respects, between man's work produced by intelligence and the processes of nature. This analogy suggests the argument. But there is not analogy between either man's works and the constitution of nature, on the one hand, and the being and attributes of the Infinite Creator, on the other. In one case we have co-ordination, arrangement, order, system and plan of parts, organs and material instrumental causes. In the other, infinite, eternal, self-existent harmony of attributes of infinite, eternal, self-existent mind. In the one case we have adaptation of parts and organs, that are material, to certain ends or work. In the other, infinite, eternal and self-existent potency or sufficiency of eternal, self-existent and infinite mind to the creation of what exists. Then we reject, in reasoning concerning the Divine Mind, the terms co-ordination, order, arrangement, adaptation, on which the extension of the design argument to the Creator is based, as utterly inapplicable, and cut short the extension of the argument. It can not be extended, because there is not an element of similarity or a parallel in the cases, and all attempt to do so is based on gross fallacies and is a gross absurdity.

We reject, also, in speaking of creation by absolute reason, the terms contrivance and contrive and work, when used in the sense that we use them in applying them to man's work. Such application makes the Creator an artificer, a tinker, that has to contrive and plan and study out the ends to be reached, and how to reach them. The terms contrivance and plan are too mechanical in their ordinary meaning. Absolute reason absolutely knows the perfect end, and the perfect means to be employed, and absolutely and perfectly uses them, and accomplishes that end, perfectly present to infinite reason. There is no study, or contriving, or planning, no working or toiling, such as finite reason is compelled to use. Pa'ey's argument is liable to the objection, that it is too mechanical. It speaks of the Creator as a mere artificer, a tinker, or at best an admirable inventor and machinist. The infidel has availed himself of this defect and caricatured it, in his assaults on the design argument, especially when he charges it with anthropomorphizing God.

But the attempt to extend the design argument to the Absolute Intelligent Cause, is a violation of the highest law of reason and all reasoning. From finite space we rise through relatively infinite space to absolutely infinite space. Here we stop. Reason does not ask what bounds absolute space, knowing that because it is absolute, it can have no boundary or limitation. In like manner, we rise from finite duration, through relatively infinite duration, to absolute duration, or eternity; and reason stops, knowing that absolute duration, being absolute, has no limitation, and no beginning or end. In like manner, from finite displays of causation reason rises through relatively infinite displays of causation, to absolute causation. From finite displays of intelligent causation, reason rises through relatively infinite displays of intelligent causation to absolute intelligent cause. Reason does not ask what caused absolute intelligent cause, any more than it asks what bounds absolute space, or what preceded or succeeds absolute duration, knowing that as absolute space can have no limit because absolute, and absolute duration neither beginning nor end, because absolute, so absolute intelligent cause can have no limitation in causation or being, and can have no cause, because absolute. The attempted extension of the argument is as absurd as it would be to continue to apply the limitation and boundaries of finite space or duration to absolute space or duration. As one is absurd and a violation of all reason, so is the other.

There is but one way of evading this: that is, to deny that we can rise to an apprehension or knowledge of the absolute. But the fact that the objector himself does, and admits he does in space and duration, and admits its validity, and that reason does in intelligent cause, or we would not have the term intelligent absolute cause, is sufficient proof that reason can, and does, and that the act is valid; as valid in intelligent causation as it is in space or time. Again, Spencer and Underwood both refute their own argument in attempting to extend the design argument to the Creator, and confess we can apprehend the infinite. Both place back of all phenomena an unknown power. Both affirm the reality of this power. As they make it the source of all phenomena, they confess its self-existence, independence, self-sustenance, and eternity, or that it is infinite and absolute. Here is a confession that reason can apprehend the infinite, and a claim, by them, to apprehend it. It is a confession that when reason reaches the absolute it stops and rests satisfied, having found the ground of all being, for they do so themselves. But we can turn the tables on these philosophers, and reasoning just as they do, we can reduce their reasoning on an unknown power, to an absurdity. Using the terms just as they do (illogically, however, we confess), we can say that from what proceeds from this unknown power, there must be the most admirable adaptation to producing phenomena, and from the character of the phenomena, there must be the most perfect co-ordination and arrangement in this unknown power; and by a parity of reasoning, there must be an unknown power to produce this unknown power, and so on, *ad infinitum;* and thus the argument proves to be utterly fallacious, for it necessarily ends in an utter absurdity.

They would retort, doubtless, and correctly, that phenomena are the results of power, and we pass back until we reach absolute power. Power itself being the source of phenomena, is not necessarily a phenomenon; and that there must be at least one power that is not a phenomenon, or all things are phenomena, and without any power, which is absurd. Then there must be a power, the source of all phenomena, and when reason reaches the unknown power, the absolute power, it has found that power, which, being absolute, can not be a phenomenon, and is the source of all phenomena, because it is absolute and can have no limitation. So we say reason declares that all we see can not be effects, or we have effects without cause, which is absurd. Then there must be a cause that is not an effect, or is uncaused, and is the basis of all causation and being. When reason has reached this it rests satisfied, knowing that absolute cause can have no cause or limitation, because absolute. Spencer must abandon his phantom, the unknown power, or accept absolute intelligent cause. Underwood attempts to destroy the argument by applying the reasoning of the design argument to the plan of the universe that must have been in the Divine Mind, and claims to prove that the argument proves the plan to have been self-existent and eternal, which is absurd. Hence, the argument is not valid. There is fallacy again in confounding things not parallel. There is harmony and consistency and logical unity in the plan, but not arrangement of parts. Again, we can admit the eternity of the plan in the Divine Mind, but not its self-existence, for it is an act of mind, a creation of mind, and can not be self-existent. The attempted refutation is a gross absurdity. We are asked, sometimes, why not stop with an infinite universe, if the mind stops with the infinite? Because the realization of the highest and most abstract ideas of reason, in the universe and in its absolutely primordial constitution, prove it is constructed by reason, that realized these ideas, and throws the reason back on absolute reason, and here reason rests, having found absolute cause. Reason can never stop in effect, even infinite effect, for it knows every effect must have a cause, an infinite effect, an infinite cause. But when it reaches absolute cause it rests, because it has found adequate ground for all being, and it reasons that absolute cause can not be limited or have a cause. What we call infinite effect is not absolute or unlimited in all attributes, for it is limited in the origin of its existence. It is an effect and must have a cause. Such is not the case with absolute cause. Hence, reason stops with absolute cause, and not until it has reached it. Spencer does not stop with infinite phenomena. He passes back to absolute power, the unknown power. There he stops. The only issue can be: Is this power reason or intelligence?

The design argument is strictly and severely inductive. The atheist should either attempt to show that its premises are incorrect, or that the conclusion does not follow from the premises. The attempted *reductio ad absurdum* is a shallow subterfuge, a weak attempt at evasion, a feeble attempt to obscure the reasoning by sophistry. It assumes that the argument is what it is not. It attempts to inject into it ideas and terms, or to change the real meaning of its terms, and thus break it down. Let the atheist answer these questions. I. Do not the co-ordination, arrangement, adjustment, adaptation, order, method, system, law, plan, prevision and provision, design, purpose, alternativity and choice, that are self-evidently seen in man's operations, using the forces and materials of nature, have their only conceivable origin in his intelligence? Must not intelligence be their cause, their only conceivable cause? He dare not deny that there are these characteristics in man's operations using the materials and forces of nature. Nor that man's intelligence is their cause, and that intelligence must be their cause, and is their only conceivable cause. II. Are there not co-ordination, arrangement, adjustment, adaptation, order, method, system, law, plan, design, prevision, provision, purpose, alternativity and choice, in the creation of the matter and force of nature, in the absolute primordial constitution of nature, in the course of evolution of nature, in the present constitution of nature, in all the existences and phenomena of nature, and in the production and control of all existences and phenomena of nature? If he denies this he contradicts the voice of all human reason, which has recognized these characteristics in all of these cases, from the first man who observed nature, until the present. He contradicts reason and common sense, which intuitively recognizes these characteristics in these instances. He contradicts himself, for he uses these terms in all of these cases in describing nature. He can not describe nature without using them. His system of evolution recognizes them in all these cases in nature. It is impossible unless they exist in nature. He renders all study of nature, all knowledge of nature, and all science an impossibility and a delusion. III. Do not the co-ordination, arrangement, adjustment, adaptation, order, method, system, law, plan, design, purpose, prevision, provision, alternativity and choice there are in the creation of the matter and force of nature, the absolute primordial constitution of nature, the course of evolution of nature, the present order of nature, in every existence and phenomena of nature, and in the production and control of every existence and phenomena of nature, have their only conceivable origin in reason? Must not reason have been their cause? Is not reason their only conceivable cause? It is an insult to reason to deny it. Reason declares that these ideas, and the ideas of mathematics, beauty, order, harmony, law and utility the most exalted and abstract ideas of reason that are realized in the creation of matter and force, and in the absolute primordial constitution of nature, in the course of evolution in the present order of nature, in every existence and phenomena of nature, and in the production and control of every existence and phenomena of nature, must have been realized in each case by reason, which created, constituted and controls nature by them, and realized them in nature in each case. From this there is no escape except to dethrone reason. The fog of the attempted *reductio ad absurdum* will not obscure it, any more than a puff of the objector's breath will blot the sun out of the noonday heavens. Thrusting one's head into that fog, an unknown power, will no more save the objector than the ostrich's thrusting his head into the sand saves him from the pursuer.

Is Religion a Perversion of Man's Nature?

The position of the atheist now is, that religion is a perversion of man's nature, at least of one element in his nature. To establish this, he should tell us the element perverted. He can not do this, and give a name to it that expresses its nature, and define it correctly, without conceding religion. The element is veneration, spirituality and conscientiousness. The proper and absolute object of veneration, and without which it is not satisfied, is God. The proper object of spirituality is spirit existence, and spiritual life. The absolute standard to which conscience appeals in its "*ought*," "I ought to do this, I owe the doing of this," to what? to an Absolute Lawgiver, Ruler, Judge, and Executive, is God. Then to establish his position that religion is a perversion of an element in man's nature, the atheist must tell us what element is perverted, establish clearly its nature, and in this way its proper use, and then show that religion is a perversion, by showing that it is not the proper use of this element. If religion is an abuse, it is an evil only, and that continually, and only evil can come out of it. The position that man has progressed by means of what is evil, and out of it by means of it, is an absurdity, and a contradiction of our moral intuitions and experience. If religion is evil, then progress has been possible only as man abandoned it, rejected evil, and chose truth, and practiced the good. The assertion of some atheists that progress has not been in consequence of religion, or by means of it, but in spite of it, is the only true ground. The assertion of others that Christianity has done great good (in its day) is an absurdity, and only an attempt to cajole its friends, and lull them to sleep until these persons can destroy it. Another query arises here: Since men have always had religions, and thus perverted their nature, in what can we trust reason and human nature? If it has always made this greatest of all mistakes in this most important of all things, and perverted itself in the most important act it ever did, in what can we trust it? Is knowledge possible? Is not search for knowledge a delusion, and knowledge itself a chimera? Then if human nature be so unreliable, how did these philosophers find it out? By means of this delusive nature? May not their attack on religion be a perversion of nature, and what they present in its stead a perversion of nature? Certainly these philosophers must have a different nature from human nature, that is so unreliable.

Another inconsistency is met here. Every other element of our nature is to be elevated, expanded, and cultivated, according to the atheist, but this religious element. It is to be eliminated. We are not to have perfect religion, but atheism, no religion. Why? Because in religion there are government, restraint, responsibility, law, punishment. "The simpleton hath said in his heart (his wishes, his desires; not his head, his reason, his intellect) there is no God!" An attempt is made to show that veneration for the true and good and beautiful in art and nature is the only legitimate use of the religious element. How do we know what is true, beautiful, and good, without an absolute standard in Absolute Reason, or God? Then all other elements have an absolute resting place, and end in the absolute. Why not this element have an absolute object of veneration, the Absolute True, Beautiful and Good in Absolute Reason? But we deny that admiration for the true and beautiful and good in nature and art, is a full exercise of the element that is used in religion. As well might one claim that the tawdry daubing of the savage is a full exercise of the law of beauty. We deny that religion is a perversion of this love for the true, beautiful, and good, or that it hinders such exercise of this element. On the contrary, religion is the only complete exercise of this element, and religion is necessary to its proper exercise, in the lower field of the atheist. The Christian can admire the beautiful in nature and art as much as the atheist, and in an infinitely higher degree, for it is the work of Infinite Wisdom. He can love the truth in nature as much as the atheist, and in an infinitely higher sense, for it is the voice of Infinite Wisdom and Truth. He can reverence the good in nature as much as the atheist, and in an infinitely higher sense, for it is the image of Infinite Goodness. The Christian has higher themes and conceptions of the true and beautiful and good than the atheist. He has absolute themes and standard which this element demands, and which alone will satisfy it. They have absolute authority and sanction, and an absolute standard which satisfies conscience and man's entire religious nature.

But what does the atheist include in human reason? Does he include man's mental, moral, and religious nature? In what sense is man's reason his guide? In the sense that it includes man's mental, moral, and religious nature, and God and revelation, that they demand and accept? All will accept that. But if they be rejected, it is but a partial recognition of human reason. Reason, when it has all the data it demands, God, religion and revelation, is man's guide. Enlightened human reason. What does that mean? Does not reason require the exalted ideas of God, religion, and revelation to enlighten it? Has reason ever been satisfied with its own decisions and guidance? Can it ever be made so? Have not reason and conscience ever looked to a higher element, to religion? Have reason and conscience ever been satisfied until they had this? Have not they ever rested satisfied in it? Will reason, no matter how enlightened by mere science, ever be satisfied with that alone, without religion, and an absolute standard in God? Can reason give man more than good advice? Can it give sanction and authority to its teachings? Can reason decide what is right and what is wrong? Can it decide what makes a thing right and the opposite wrong? If it could, can it give such authority and sanction to its decisions as to impel men to do what is right, and restrain them from doing what is wrong? Ought not we to carefully weigh these questions before we cast to one side *religion, for what is called enlightened reason?*

Can Modern Science, Physical Science, and Evolution give us Morality, and a system of Morals?

Can morality be made a subject of investigation by physical science? Has it the data or methods to attempt or conduct such an investigation? To ask the question is to answer it. What would such persons investigate to learn and determine morality? How would they conduct the investigation? Investigate matter and physical force? Use crucible, retort, microscope, scalpel, tape-line, and balance? No; they would have to investigate man's moral and religious nature. They would have to accept and use the catholic ideas of his religious and moral nature. Without them they would not think of such investigation; for in this element of man's nature alone is found the subject of investigation, and these catholic ideas alone furnish ideas to be used in the investigation, and the means and standard of investigation. Then has science, physical science, any thing to do with morals? If atheistic evolution be true, can there be any morality, or moral idea, or character, in any thing? Mere matter and force have no moral nature, character, or idea in them. If there ever was a time when they alone existed, there was no moral nature or character, and such things could not have come into being, nor any thing possessing them, if the scientist's maxim, "Out of nothing, nothing comes," be true. Let us lay to one side all ideas of morality, and trace this course of materialistic evolution. Let us take *physical science* as our standard. First, we have to lay to one side *all freedom*, all volition, all choice. Physical science, with its matter and physical force, knows only necessity. Out of such a basis no freedom or volition could be evolved. Next, we lay to one side all idea of truth and falsehood, good and evil, vice and virtue. There can be no such distinctions. We have no foundation for such distinction. Such distinction could not be evolved out of mere matter and force. They would never hint or suggest it. All things are alike the product of evolution by matter and force, and there is no distinction or moral quality in them. One thing has no greater right to exist than another. We can not elevate one act or thing above another. We have no standard above what matter and force produce. These distinctions we make are—well, we were going to say false, but we can not, for they exist, and are the products of matter and force. The whole nature of man is a contradiction, a clash, a warfare of things alike evolved by necessity. If we say one of these antagonists ought to exist, we have a standard above physical science, and discard physical science.

The supreme of physical science is force. All is evolved by force. The fittest survives, and that is the strongest. There is no fittest, for that comes from something above force. Force evolves all things, and one is as fit as the other. The strongest survives. Force knows no high or low, no fit or unfit, no good or evil. It only knows the strongest or weakest. Then an unrelenting struggle for life is the order of nature. Massacre is normal and right. A selfish struggle for life, in which the strongest survives, is the supreme order of nature, and the supreme law. Self-preservation by any and all means in our grasp, (which is not the law of nature, as is asserted, but the law of brute nature,) is indeed the supreme law of nature. A selfish struggle with all else, a selfish struggle in which all else is ruthlessly extirpated, and in which the strongest survives, is the supreme standard. This is as high as evolution, in which there is a struggle for life and the strongest survives, can go, for a stream can not rise above its fountain. Right and wrong, vice and virtue, self-denial and self-sacrifice are aggravating cheats and impudence. They torture us with ideas and dreams that are false and can not be realized, for the strongest survives. Then they torture us for our failure to realize them. Our nature is a most cruel mockery and delusion, especially what we madly regard as its highest element and controlling element. Then there are other beauties still to unfold. Selfish struggle in which the strongest survives is the supreme law. Then self-gratification is the supreme end and law for us, for that is but carrying out the supreme law, a selfish struggle in which the strongest prevails or survives.

Then each one struggles with all the rest, and the strongest prevails—might makes right. Each selfishly takes all he can get, and keeps all he gets. Truly, in this system of materialistic evolution, "The chief end of man is to keep all he gets, and get all he can." Another beauty: There is only blind, irrational matter, and blind, physical force in the universe, except in man, and a lower order of intelligence in animals. As the stream can not rise above its fountain, there is no difference in man's acts, for all are the ongoings of force, and alike necessary, and alike the product of force. The highest achievement of human reason, or of man, is to learn the ongoings of nature in time succession, and learn to keep step with the machine. The struggle is for life and self, and self-gratification. Man's supreme object is to get all the gratification that he can, without being crushed by the machine. All talk about laws of nature is nonsense. There is only time-succession. All talk about obeying laws of nature, or nature executing its law, is nonsense. You keep step with the machine. You do not disobey law. You were not wise enough to keep step, and the blind machine crushed you. It is not executing a law. You know that this machine is irrational. You know that you are smart enough to cheat this irrational machine, nature, out of vast amounts of selfish gratification, and avoid being crushed, provided you are stronger than your fellow-men that come in collision with you. Indeed, that is the supreme law, for in this struggle the strongest prevails. Do this, for there is no Intelligent Ruler, Lawgiver, Judge and Executive. Pitch in, and the blind monster, nature, with your help, crush out the hindmost.

Then if there be a law of evolution, and all things be controlled by necessity, as must be the case; if struggle for life, with survival of strongest, be the supreme law that controlled it, and controls it now—for no stream can rise above its fountain—then self-denial for what we call virtue and truth, are mere cheats and shams. Indeed, they are a sin, for they are a violation of the supreme law. The martyr, the patriot, the philanthropist, are not only fools and madmen, but criminals, and these things that this delusive humbug, our nature, calls the chiefest of virtues, are the highest of crimes, for they are violations of this supreme law, a struggle in which the strongest prevails. Their supposed glory is a cheat. Not only so, but the man who relieves disease, or one in want, or suffering or distress, is guilty of a crime, as much as the one who helps a criminal escape from a sheriff. I know this will be indignantly denied, but let the one doing it take mere matter and force, and Darwin's laws, and the course of atheistic evolution, and show wherein there is one particle of injustice to the system of atheistic evolution out of mere matter and force. I challenge any one to change it one particle, with only such a basis to reason from. Finally, can physical science produce, at best, more than material civilization? This is but an increase of power. How shall it be used? What shall control it? Material science can not hint an answer to this question. Are the most learned, most scientific men, necessarily the best? Does mere physical science make them so? Physical science can not give us a moral idea.

Draper's Conflict of Religion and Science.

No book has ever been published that has displayed so great lack either of intelligence to comprehend the question it discusses, or of honesty and fairness to state and meet it. It is continually *presented* as a conflict between Christianity and science. We have no correct definition of either. The author assumes that a certain hierarchy is Christianity, and that its assaults on science have been the attacks of Christianity. A more unfair statement never was made. Christianity is a system of dogma, or of truth to be believed; and of worship, or of acts of religious aspiration and devotion; and of discipline, or rules of life, prescribing how man shall discharge his duty to God, his fellow-man, and himself. Its object is to save man from the love of sin, the practice of sin, the guilt of sin, and the punishment of sin. It teaches that if men believe with the whole heart its doctrines, perform in like manner its acts of worship, and live its rules of life, they shall work out and attain to this salvation. This doctrine, worship and discipline are contained in the New Testament alone. Christianity teaches that the New Testament is the only rule of faith and practice of men, and what can not be read therein or proved thereby, is not to be required of any one as an item of faith or religious duty. Christianity teaches that the apostles were inspired to give the New Testament as the only rule of faith and practice of men—that the New Testament is a revelation, and the only revelation of the will of God now binding on men. The New Testament clearly teaches all this itself. It teaches that inspiration and revelation ceased with the apostles, and that the opinions or acts of no man or set of men or hierarchy or church are binding on men as is the New Testament, nor in any sense except as they are based on it. The New Testament recognizes the right of conscience and private judgment in using the New Testament.

The New Testament most pointedly forbids and repudiates the idea that the acts or opinions of any man, or set of men, shall be regarded as Christianity. It contains pointed and clear teaching on this point. Christianity, then, being a revealed system of doctrine, worship and rule of life, is to be found only in such revelation. This is as plain as sunlight. Then, when charging Christianity with any course of conduct, the one making the charge must prove either: 1. That Christianity, the New Testament its only rule, enjoins and commands such things. 2. Or that it approves of them. 3. Or that it tolerates. 4. Or that they are the natural and necessary outgrowth and result of the teachings of the New Testament. Will Dr. Draper or any of his advocates or apologists answer these questions? I. Where in the New Testament is this persecution of science, this opposition to science commanded? II. Where in the New Testament is it approved? III. Where in the New Testament is it tolerated or mentioned without condemnation? IV. Of what teaching or doctrine of the New Testament is this opposition to science the natural and necessary outgrowth? Had Draper honestly asked himself these questions, his book would never have been written. We will go farther, and affirm that this persecution is utterly foreign to the teachings of the New Testament, to their spirit, and tendency, and express declarations. Christianity does not concern itself with science, in the modern use of the word. It forbade its teachers being entangled in the disputes and quarrels of science, when engaged in the discharge of their religious and churchly duties. It utterly forbids all temporal pains and penalties being inflicted by the church. Admonition, rebuke, and withdrawal of church-fellowship, are its extreme penalties. Its unworldly, charitable spirit, its exalted and unusual philanthropy, and freedom of conscience and judgment, forbid all such persecution.

Some years ago the monarchists of Europe used to point to American slavery as the natural result of the principles of our Declaration of Independence. They used slavery as a means of assault on republicanism, and declared that its iniquities were the necessary result of democracy. Not long ago the State lecturer of the Good Templars, in one of our States, spent a week in a drunken debauch. The brewers' organ charged his conduct on the temperance order to which he professed to belong. Americans used to be very indignant at the dishonesty or unfairness of monarchists in charging on the Declaration of Independence and republican principles what was a palpable violation of every one of them. The Good Templars were indignant that the conduct of a man, in violation of the obligation of the order, and every principle and object of the order, should be charged on the order, as the teachings, or necessary result of the teachings, of the order. It displayed either an utter lack of intelligence or an utter lack of honesty. The two cases given above, are not any more palpable and gross than "Draper's Conflict of Religion and Science." Had a priest acted in this way in regard to science, with what indignation it would have been received by these scientists. Is such, worse than pettifogging, as this the fair, liberal and dispassionate literature, written on impartial and scientific priciples, that this new science is to give us? If so, we will soon have a repetition of the "Conflict," only scientists will be acting just as the hierarchy, it unjustly regards as Christianity, acted.

Biblical Contradictions of Science.

There are but three portions of the Scriptures that are regarded as contradicting science that are worthy of serious consideration. These are the account of creation, the account of the flood, and Joshua's commanding the sun and moon to stand still. We will endeavor to examine these accounts, just as a scientist would examine them, if found in the archaic literature of any other nation than the Hebrews—just as Müller would examine them if found in the literature of the Persians or Indians. We regard as established by research in ethnology, philology, old religious histories and historic traditions and archæology the following facts. We can trace all dialects back to one parent stem, and trace them to their origin in Western Asia. We can trace all races of men to one common origin in Western Asia, as we examine the origin of their language, traditions and religion, and trace their migrations, and their ethnological origin. We can trace certain universal traditions to their origin in Western Asia. We can trace old religions to one origin in Western Asia.

Mankind began in Western Asia, with one race or parent stock, with one language, one religion, a simple monotheism, and tradition says it was a revelation, and one set of historic traditions, and a common civilization, with society, law, government and knowledge of the useful arts. The oldest records we have of men are of men in Western Asia. They place man before us comparatively civilized. Rawlinson declares that there was in the valley of the Euphrates, or around the Persian Gulf, a Hamitic race, the Accad, that is the oldest of which we have historic trace. Baldwin calls it the Cushite, and places it in Arabia near the Persian Gulf. Bunsen calls it the Kamitic, and places it in Egypt. But Baldwin and Rawlinson prove that the Egyptians came from Asia.

All these agree that this parent race had language, from which was derived the Hamitic, Egyptian, Semitic and Touranian families of languages. That they had civilization and learning, from which came Egyptian, Persian and Indian civilization and learning. Also Phoenician and Canaanitish. This language was retained as the language, sacred language, of the Chaldean priests, or priesthood of Assyria and Babylonia. So were its traditions and religious ideas. They were the esoteric doctrines of the priests of Egypt, Assyria, Babylonia, Arabia and Western Asia, Persia and India. There are certain historic traditions that are common to humanity all over the globe. They are creation, primeval innocence and purity, angelic intercourse, great longevity, a first transgression or a corruption, loss of angelic intercourse, innocence and longevity, a flood and preservation of men and animals by a ship. These traditions had their origin in Western Asia, in the cradle of the race, and in this Accadian history and learning. There are two accounts that have come down to us, both having their origin in Western Asia, and in the region in which this Accadian civilization flourished. One is the Chaldean tradition, published by George Smith, in his last work; and the other is the account in the Scriptures. These agree in a remarkable manner, and doubtless had a common origin. They are free from the puerilities and absurdities of other accounts, and have that peculiar style that characterizes veritable history. We need examine only the scriptural version found in the book of Genesis. This book is attributed to Moses, a Hebrew legislator, statesman, warrior, prophet and leader, who lived about fifteen hundred years before Christ. The records of Egypt and Israel, and the voice of antiquity, establish: I. There was such a man as Moses. II. His people were in bondage in Egypt. III. He lead them over into Asia and into freedom. IV. He gave them their national religion, laws and government.

It is established with ten-fold the evidence we have for Hesiod or Herodotus, and a hundred-fold the evidence we have for Confucius, Guatema or Zoroaster, that he wrote the Pentateuch, except small additions, that do not seriously affect the text. The voice of the learned world in the time of Christ, and ever since, the history of Pagan antiquity, and the voice of the entire literature, history and institutions of the Hebrews, establish this beyond a doubt. No one would question it unless there were ulterior motives to be reached. This account of creation and subsequent events, down to the time of Moses, was written long after creation, we believe at least four thousand years, and perhaps much longer. All nations had historic traditions. Western Asia had some very complete traditions. All that was preserved of the history of the race, for many generations, was preserved in tradition. From the Accadian civilization down, there were written, hieroglyphic or pictorial fragments of these traditions. These traditions were the basis of all the old religions and mythologies, and were preserved more or less complete in them. Moses may have collected and corrected these fragments in Western Asia and Egypt, and used them as a basis for his history. The character of the book of Genesis accords with this supposition, and some think establishes it. It would not affect the truthfulness of his history. Let us now examine this account just as we would any archaic account, and compare it with the teachings of science, and see whether it contradicts the established facts revealed by scientific research—whether it agrees with them. Let us remember that man had no science of geology then, and no geologic terms. Moses did not know any thing about them, nor the people to whom he wrote. He was not writing a geologic treatise.

The account is written in bold figurative language. It uses the terms and ideas of ordinary speech, with poetic license. As Moses was writing for other generations, and other peoples than his own, if he be allowed to explain his object, the account had to be written in an universal language. Just as signs, gestures and intonations are a natural language, so symbolic language, figurative language, clothing ideas in metaphorical garb, in poetic style, is an universal language. The account had to be written in this manner. Then from the first verse of Genesis to the close of the third verse of the second chapter, we have the *Epic of Creation*, written by Moses; a majestic setting forth in symbolic expression and figurative language of an outline of the great facts of creation, in poetic style. Then the account would only be correct in general outline. It is unfair to subject it to the microscopic analysis to which modern cavilers subject it. We can not expect scientific terms, for there were none then; nor scientific precision, for it is written in poetic and symbolic style. The objections are these: 1st. The order of creation is not the same as the order of succession established by science. 2d. It teaches the heavens are a solid firmament in which the stars are set. 3d. It represents the creation as occupying only six days of twenty-four hours. To the first objection we reply that the exact order need not be followed, in a poetic account, and very often is not. Then again such geologists as Dawson, Dana, Tenny, Silliman, Hitchcock, Miller and a host of our best geologists prove that there is substantial agreement, as full agreement as can be found between poetic and literal descriptions in other things. The writer sets forth in poetic style what would appear to an eye-witness as the prevailing order [illegible]ence, or what was specially prominent in the creations of each period.

Cosmical light appeared on the second day. The light of the sun became prominent on the face of the earth, on account of dispelling of the hitherto prevailing clouds and vapors, on the fourth. Then treating this poetic account in a candid spirit, there is no real contradiction between it and any established truth of geology. In regard to the second objection, we reply that *rakia* means simply what is spread or expanded, in its etymological meaning. It is not confined to what is spread or expanded as a plane. It does not contain necessarily the idea of material or substance in what is expanded. It may mean, and does sometimes, expanse of space. That is what its root meaning expresses. In this old writing we should give preference to the root or old idea. We are not compelled, by its use here, or the context, to give to it the idea of matter expanded in a plane, or of a plate. Even if the Hebrews in after ages so understood it, it does not prove that the writer in this sublime epic, in his poetic expression used it in that narrow materialistic meaning. It is unfair to take the meaning that will falsify the account and make the author talk nonsense, and insist on giving that word that meaning, evidently for the purpose of making him utter nonsense, and of destroying the account. In all other documents or writings, our scientist friends would say: "The author has a right to the presumption that he talked sense, and such meaning should be given to his words as will make sense, if they have such meaning, and the context does not forbid." They will apply this rule to all writers but those of the Bible, and allow it to be applied to all but them. If one attempts it with them, he is insulted by being sneered at in regard to the wonderful flexibility of the Hebrew language.

The word has another meaning than the one the skeptic gives to it, evidently to falsify the account, and it is its root meaning, and on that account we give it to it, especially as it agrees with the poetic style and demands of the account, and his absurd materialistic meaning does not. The third objection, that it represents the creation as occupying only six days of twenty-fours hours, is of the same character as the last. The word *yam* means the time from daylight to dark—twenty-four hours—the time of a generation, the period in which one lived, the time of an event or thing, whatever it may be. We could give hundreds of cases giving scores of illustrations of each meaning. In this account, in the fifth verse, it means a period. Also in the fourth verse of the second chapter, it means the entire seven periods of creation. Then God rested on the seventh day—ceased from creation. He is resting or ceasing now. We live in that seventh period, or day, now. It is a long period of time, not twenty-four hours. Hence, by parity of reasoning, the others were. Then we are not compelled by the context to give to *yam* any such meaning as a literal day. We certainly are not by its meaning and use in other places. Its use in two places in the context forbids it. One use in the context, and the one that most palpably determines its use in this account, most palpably forbids it. This is not a dodge, but was believed by old writers thousands of years before geology ever raised this objection. Again, this account claims to be a vision, a retrospective vision, as prophecy is prospective vision. In prophetic language day generally means simply a period, and not often twenty-four hours, especially when poetically used, as this is. Then the same remarks about the unfairness of the infidel apply here, that were made over *rakia*.

Then taking the account as it really is, as a poetic description in symbolic language of the leading events of creation in general outline, and allowing the writer the same right as we concede to others, the presumption that he wrote sense, and that such meaning be given to his words as will make sense, and the account a sensible one, and taking the root meaning of *rakia*, and the one demanded by the poetic style of the account, and taking the meaning of *yam* usually given in prophecy, and the meaning in which it is twice used in the account, and in the place which definitely defines how it must be taken; we have all the agreement of the account with the facts that could be expected or asked in such an account, a poetic description, using words in their common meaning in poetry, and addressed to people utterly ignorant of science. Unless we have ulterior designs to accomplish and wish to make the writer utter nonsense, and to falsify and destroy the account, we will do this. If we have that object in view we will give to them the meaning that will make nonsense of the account, even if we have to reject the meaning that the context declares must be the meaning of the words, and the meaning that the style and account will allow, and allow no other.

But is this account a revelation and inspired? Some think Moses was merely the mouth-piece of the Spirit that wrote it through him. Others, that the events passed in prophetic visions before him during six literal days, and he described them as they occurred, and in that sense day means twenty-four hours, and was so used, although the original of the vision was a period of time. Or that he speaks of each day's vision, and day means the period that was set forth in vision in a day, and not the time of the vision. Others, that he merely collected and corrected and united in a consistent whole, accounts already in existence, until he reached his own day. The fact that there are traces of this account in other systems of mythology or religion, and that we have in the Accadian account one very similar to this, rather establishes the latter view. I know that it is claimed by some advocates of the Bible, that all these accounts are stolen or borrowed from the writings of Moses, and are subsequent to him; but such a position is untenable. The Indian, Egyptian and Assyrian accounts are undoubtedly older than the days of Moses, in their origin. This is palpably the case with the Accadian account. Whether both accounts, the origin of all other traditions and the account of Moses, are both separate revelations; or Moses accepted and incorporated into his book a correct record or tradition of a previous revelation; the account in Genesis and whatever there is that is true in the other traditions, were, of necessity, a revelation. The original of the Accadian account was a revelation. So was the original of whatever truth there was in other traditions. Our reasons for it are these: Man, when Moses wrote, and before this time, had no science of astronomy, and not a ghost of an idea of geology. He had no experience, or recollection, or knowledge of creation. If he attempted an account, it would have to be a guess, and would be full of errors. He did make such attempts, especially in attempting to amplify the fragments of tradition he had in his possession. All such accounts are puerile, contradictory and absurd.

Many gods, men, angels, monsters, animals and monstrosities figure in them in the most absurd manner. All have the inconsistency of having an universe existing before the creation they describe, and as a foundation for it. This account begins with placing the infinite, self-existent Jehovah anterior to all being except Himself, as the origin of all things. All things had their source in absolute mind. It represents him as bringing all things into being as immediate and absolute creations, as far as the origin of each great class of being is concerned. This is expressed in a sublime and grand style. The acts are worthy of divinity, and in a manner worthy of divinity. The account has been regarded by all critics as the model of sublimity and grandeur in description, conception, and in the things described. There is nothing childish, puerile, or inconsistent, or merely fanciful about it. It is absolutely free from all the absurdities, fancies and puerilities of all other accounts. As we have shown, when properly interpreted, it agrees with modern science, as much as a poetic account in general outline could possibly agree with it. Where did man get this account so above the age and his condition and beyond his knowledge and power? It was a revelation. Whether revealed first to Moses, or others before Moses, and then also to him, or he copied it, and handed it down to us, we know not certainly, and care not. It is true and an inspired history of creation.

We have not availed ourselves of certain saving clauses that some writers use in defending this account. It is true that man had no geology when Moses wrote, and had Moses written an accurate geologic account, suited to the present state of science, the people then could no more have understood, than an alphabet class could understand Lyell's Principles of Geology. It is true, also, that had he written it so much above the state of knowledge and the human intellect, men would have rejected it as children reject the statements of Lyell's Geology, because they can not comprehend them, and would have done so for generations. It is true, also, that it would have defeated its object, the salvation of man from sin, and set him to studying science. It is equally true that were Genesis adapted to our style of thought and our scientific knowledge of to-day, that four thousand years from now it would, no doubt, be far more unfitted to the style of thought than the infidel supposes it to be now. It is true that the Bible is not a book of science, and could not be. Also, that inspiration was not omniscience, nor revelation, except on its particular object. The Bible might have spoken of creation as men then thought and spoke, and have accomplished its purpose. We, in our common speech, say the sun rises and sets, when we know it does not. So does the Bible. It might have done so in regard to creation, and no one could reasonably object. The spirit of inspiration might have used day and firmament as the infidel claims, and there could be no valid objection to it. Such expressions would not be revelations or science any more than the expression the sun rises, nor an indication of the ideas and teachings of inspiration on such matters; but a use of words in their ordinary use, and an accommodation to the necessities of human speech and thought.

But we believe that revelation should speak the truth, when revealing the facts of creation, and accord with scientific truth, as far as it does speak. We believe we have shown that Moses does not use the ideas and beliefs of his day. His account is free from them, and infinitely above them. He writes in poetic style, and gives, in symbolic language, in general outline, the leading facts. He had to do this, on account of the state of knowledge then, and the fact that his account was for all nations and generations. Symbolic language is the universal language, and he used it, giving to his words the meaning they have in poetry, and in such composition, prophetic vision, and it agrees, in all respects, with science, and in such a manner, and to such an extent, as to prove it to be a revelation, when we take into account the age in which it was written, and the state of man's knowledge then, and the character of man's attempts, when uninspired, to describe the same events. Such we believe to be a fair and candid treatment of this remarkable account, and one the infidel would give, if found elsewhere.

Noachian Deluge.

The tradition of a flood is perhaps the nearest an universal tradition of all the historic traditions. It is found in all quarters of the globe, and in nearly all tribes of men. The flood was back of the historic period of Egyptian history. So it was before the Accadian civilization that preceded it. Then, the flood transpired before the emigrations of races, and while man was in the cradle of the race, and in Western Asia. We have two accounts that are almost literally and verbally the same, the Accadian or early Chaldean account, and the account recorded by Moses in Genesis. These accounts from different nations evidently had the same origin. The Accadian account existed before the days of Moses. Moses, from the peculiar structure of Genesis, doubtless took and united into a consistent whole, traditions that obtained in Western Asia, concerning many of the important events of man's primeval history. He united these with proper connections and additions. The account of the deluge is one of these traditions which he either took from the Accadian literature or from the same source from which it obtained it, for the accounts had one origin, and the Accadian is the oldest. Part of the account is tradition, and part the work of Moses. With a few preparatory remarks in the VI. chapter, extending, perhaps, to the eighth verse, Moses copies the account of an eye-witness. The account is just as an eye-witness would write it. Just as it appeared to Noah and his sons. Noah was a prince, wealthy and educated, and evidently as educated as the civilization of his day. There had been thousands of years of history and progress of mankind who were yet in the cradle of the race.

The remains of man's work in that region, the pyramids and other works, that were erected shortly after Noah, show that the building of the ship was not an impossible task in his day. How much of this account in the Bible is true? With a proper interpretation, all of it. Great catastrophes have destroyed life on portions of the earth's surface often during geologic times. Great floods have devastated portions of it, in consequence of geologic catastrophes and subsidence of land. The coal formations are a proof of this. A great catastrophe within the human epoch has devastated Western Asia. The Dead Sea is thirteen hundred feet lower than the Mediterranean. The Caspian is eighty feet lower. The Jordan, it is thought, once flowed through a *wady* or valley to the Red Sea. A great geologic catastrophe, producing a flood, devastated this region. It happened in human history, for man has a tradition and history of it. The race was in the cradle of the race in Western Asia and had not separated into races and languages then. The catastrophe affected the whole human race, and destroyed it, except a few saved in a boat or vast ship. It devastated the then habitable and inhabited earth. The ones saving themselves in the ark, saved their domestic animals with them. One of them, as an eye-witness, described it as it appeared to them. Moses used the account. The writer, as was customary in the hyperbolic and extravagant speech of Western Asia, and of that early period of our race, speaks of what was devastated—the inhabited earth—as the "whole earth." Of the animals of that region, as all the animals. Of the animals saved, as all the entire animal kingdom. He writes as it looked to him, excited as he was by so awful a catastrophe.

Then, making necessary allowances for the hyperbole and extravagance that characterized the speech of Western Asia, and the early periods of the history of our race, and for the exaggerations of an eye-witness, excited by the awful catastrophe he witnessed, it is correct. There was a flood which destroyed all men but a few, and devastated all the then inhabited globe. All animals of the then inhabited globe were destroyed, except what man saved. These few men saved themselves and these animals in an ark. The Bible account is historically definite, consistent, and of deep moral significance. Of great antiquity. Forms an essential part of a grand religion. It is true.

Joshua's commanding the Sun and Moon to stand still.

It should be borne in mind that in the days of the writing of the book of Joshua, there was no punctuation, as there is in our printing and writing now. Quotations could not be separated from the author's language as they can now. On that account they were quoted as a part of the author's language to a degree not practiced now. Often they were not separated from it. Let the reader turn to Judges v, and read the "Song of Deborah and Barak." In it, it is declared "the stars, the hosts from heaven, in their courses, fought against Sisera." All understood this to be poetry, and no one objects to it. But suppose a writer in the days of the Kings were writing the history of his people, and were describing the battle of Barak with Sisera, and were to say, This is the time when, as it is written in the "Song of Deborah and Barak," "the stars in their courses fought against Sisera, and the hosts of heaven." All would understand it to be a quotation of poetry, and not a historic statement. There was a Hebrew poetic book—Jasher. In this book, with the license of poetry, the author declared that "Joshua commanded the sun and moon to stand still, and the Lord hearkened, and the sun and moon stood still for a day." The writer of Joshua quotes this poetic declaration of one of the favorite poems of his people, and quotes it in the literal manner of the composition of that day, in precisely the manner we have supposed above. Just as we would understand one to be poetic license, so we do the other. There is no more contradiction of science in the quotation from the book Jasher in Joshua, than there is in the Song of Deborah and Barak, recorded in Judges; only in one the whole song is quoted, in the other only a paragraph. It is quoted in the literal manner of the writing of that day, as though a part of the text; hence the misinterpretation and confusion over it, and the desperate attempts to do what never can be done, make it accord with science, or explain away its contradiction of science, if we take it as a narration of a historic fact by the historian, and not a quotation of a poetic hyperbole, from a national poem, and quoted in the literal manner sanctioned by the usages of writing in that day, and caused to some extent by lack of punctuation.

Absurdity of Materialism.

We have spoken of the absurdity of the idea that mind can be correlated with physical force, and asked what knows such correlation. If mind be physical force, then physical force knows the correlation of physical force with physical force. Some years ago Abner Kneeland was bothering some young preachers with objections to the idea that there was any such entity or existence as a Spirit. Mind was merely a function of matter. Matter was the only existence. At last he appealed to a gentleman present, who had taken no part in the conversation (Colonel Knapp, of Winchester, Ill.), and asked him what *he* thought of it. "You believe in the existence of matter as an entity, a reality, a real existence?" queried Knapp. "Yes, sir," he replied, very confidently. "Why do you believe in the existence of matter?" continued Knapp. "Because it is self-evident," said Kneeland, *promptly.* "Self-evident to what, if there be no existence but matter? Self-evident to itself? The existence of matter self-evident to matter?" queried Knapp. Kneeland's answer was never given. We submit it to all materialists. Also the question, if mind be physical force, and be correlated with physical force, what knows it; what measures the correlation? What is the standard? What is the measure, and what is the expression of the equivalence? What is the momentum and velocity, and other characteristics of physical force of mind? Can it be measured off and weighed and computed as we can physical force?

Mill's Absurd Attempt at Wit.

Evolutionists have ever been nonplused by the application of their own favorite axiom, "*Ex nihilo nihil fit*"—"Out of nothing, nothing comes"—to their own system of evolution of all things out of blind, irrational, insensate matter and force, and by blind, irrational, insensate matter and force. They wish to eliminate all idea and possibility of intelligence having any thing to do with the origin of the course of evolution. Mind, intelligence, reason, and mental and moral nature and character, have been evolved out of blind, irrational, insensate matter and force, and by means of them. When they have taken this position, as they must to get rid of all intelligence in the origin of evolution, and in control of evolution, the query is presented: How can matter and force, blind, irrational, insensate matter and force, evolve what is not in them, if out of nothing, nothing comes? Some, like Tyndall, assume that all possibilities of being were potentially in the primordial matter and force. But science demonstrates that the condition in which the scientist claims matter and force were primordially, renders all idea of life an absurdity. Then common sense scouts the idea that reason, thought and moral nature were potentially or actually latent, or nascent, or active, in fire-mist of blind, irrational, insensate matter and force. Mill attempts to set to one side the objection that matter and force can not evolve what is not in them, with a shallow witticism. He says: "It no more follows, that because man is intelligent, his source or cause must be intelligence, than because we find pepper in the soup, there must be pepper in the cook." The evasion will not let him out of the dilemma.

If the making of the soup was an evolution, and the cook evolved the soup entirely out of herself, we would say that if we found pepper in the soup, there must be pepper in the cook, for if the cook evolved the soup entirely out of herself, there could be nothing in the soup that was not originally in the cook. And we would say if there was pepper in the soup and none in the cook, then the soup could not have been evolved out of the cook, for evolution could not put any thing in the product that was not originally in that out of which it was evolved. Mill's illustration is a most admirable refutation of his attempt to claim that matter and force can evolve what was not originally in them. If he means to apply the witticism to the reasoning on causation, it is equally fallacious. We say that man, an intelligence, must have had an intelligent cause, not on the principle that the effect must be like its cause, or the cause like the effect, but on the ground that an effect must have an adequate cause. An unintelligent cause is not adequate to produce an intelligent effect. A cause may produce what is less than itself, but never what is greater, much less what is infinitely greater, as must have been the case, if an unintelligent cause produced intelligence as an effect. Again, in material and rational nature, there are effects that must have had an intelligent cause, not on the ground that causes must be like the effects, but on the ground that causes must be adequate to produce effects. This attempt of Mills is as shallow and fallacious as Spencer's attempt to set to one side the design argument by the watch illustration.

The Man with Two Wives.

In listening to an attempt made by one of the most eminent advocates of evolution, to illustrate and demonstrate the action of the principle of natural selection, the author was struck with it as an illustration of the utter blindness displayed by these persons, as to the real effect of their principle of natural selection, if we were to apply it as a cause to produce the phenomena under investigation. He was attempting to account for certain animals changing their color during different seasons of the year. He took the case of the large hare of the Northern States. It is a dark color in summer, when there is no snow, so that its color is so like the old forest leaves on which it lies, that it is very difficult to see it. It is white in winter, and can lay on the snow, and it can hardly be noticed at any distance, and is generally passed without notice. "Now," said he, very learnedly, "the theory of creation assumes that intelligence so created the hare that it is white in winter and brown in summer. Intelligence adapted the color of the hare to its surroundings to protect it from its enemies." Well, it *does look* very much as though that was the case. "But," continued he, "Science says that in summer the enemies of the hare could see and destroy the white or light-colored ones, and the brown ones escaped. In winter the enemies of the hare could see and destroy the brown ones, and the white ones escaped. So you see that natural selection selected the brown ones who escaped in summer, and the white ones who escaped in winter, and thus the white color of the hare in winter, and the brown color of the same animal in summer, was caused by natural selection. The conditions adapted the animal to themselves, or the animal adapted itself to its conditions, and was not adapted to them by some higher intelligence."

A more complete jumble of words, and preposterous attempt to make a case out of the very opposite of what was needed to establish it never were seen. There was no natural selection to save the animals, but, on the contrary, to destroy them. Their enemies selected them. Those that survived did so not because nature selected them for that purpose, but because they escaped natural selection of their enemies. Then destructive agency is appealed to as preservative agency. It seems to common sense that if the enemies of the hares destroyed the white ones that could not evade them in summer, and then destroyed the brown who escaped in summer but could not evade them now, there would be no hares left. Then the absurdity of using this to account for changes made in such opposite directions in so short a time. How could the operation of such destructive agency make the same animal exactly the opposite in color during one part of the year, to what it was the other part? I heard of a Mormon who had two wives. One was an old woman and the other was a young one. The Mormon spent an equal portion of time with each alternately, for they would not live peaceably in the same house. When he was with the old wife, she pulled out black hairs, for she wanted him to look as old as herself. When he was with the young wife she pulled out white hairs, for she wanted him to look as young as herself. Here was the principle of natural selection at work. According to the lecturer, the Mormon's hair became black while he was with the young wife, and white while he was with the old wife. Unfortunately for the theory, that was not the case. Like Jack Sprat and his wife, one of whom ate all the fat and the other all the lean, and who cleared the cloth and left the platter clean, one wife pulled all black hairs and the other all white ones, and left the Mormon's head as bald as a ripe pumpkin. Common sense says that what the lecturer called natural selection, would have exterminated the *hares*, as the Mormon's wives extirpated the *hairs* of the unlucky Mormon's head.

Common sense, says also, that intelligence gave to the hare those colors as its protection, and adapted the color to the surroundings, and that neither the animal adapted itself to its surroundings, for it had neither the intelligence nor the power to do so. Observe what an absurd attempt to strip the Creator of the results of his wisdom and power, and absurdly ascribe them to the hare. Nor did unintelligent conditions adapt the hare to themselves, for the conditions, as far as they operated at all, destroyed the hare. A careful analysis of nearly every supposed case of natural selection would develop as great absurdity. Intelligence, and the work of intelligence, are ascribed to animals and unintelligent conditions, and destructive agencies are appealed to as preservative agency. Any thing to get rid of intelligent cause.

Mimicry of Nature.

The change of color in animals at different seasons, that enables them to escape their enemies, suggests another wonderful feature of nature—what is called its mimicry. There are insects popularly called walking-sticks, that when in danger will fold up their legs and look so nearly like a dead stick or piece of twig, that unless they are seen doing it, they will escape the search of almost any one. Evolution supposes that some nondescript insect once existed. Those who were most like sticks escaped. Of these, those that were most like sticks escaped and perpetuated themselves, and the process continued in that direction during an almost inconceivable time, until the present wonderful mimicry is reached. But there are some questions to be answered. First, there would have to be a vast change before the change would be at all useful, or operate in saving the insect. What kept this process in operation persistently in one direction for such a vast period until the change became great enough to have a particle of preservative effect? Then the act of the animal in folding up its legs: what principle of natural selection did that? Here is a display of considerable intelligence. Then intelligence must have implanted the instinct that acts so intelligently. The author once accidentally detected a butterfly in which this mimicry was still more wonderfully displayed. It was flying around, and flew so near him as to be alarmed. It folded up and lay on some dead oak leaves, and looked so exactly like them that it was only by turning each leaf near where he saw it last that he found it by touch.

He laid it and a leaf on his hand and examined them, and asked if blind, irrational matter and force wrought out such a result. The color was a perfect mimicry. So was the head an exact mimicry of the stem of the leaf where it had been attached to the tree. There was the stem running up through the leaf, and its branches off, all mimicked. Not long after he detected another that fastened itself onto a twig, and mimicked a green leaf in the same way. How did all this come into existence? They mimicked oak leaves, the prevailing leaf of that region, and the prevailing variety of oak. One mimicked a dead leaf, the other a green one. If natural selection did this, what was the insect before it was changed into such a wonderful imitation? What preserved it until change enough was made to produce any preservative effect? What kept the influences at work during all this vast period of time, until such a wonderful result was reached as would be preservative? I know it may not be scientific to ask such questions, but still reason *will* ask. A negro orator was once expatiating on creation. He described the process of making man until he was set up against a fence to dry. "Look here," said a skeptical listener: "who make dat fence?" "O you stop your noise," said the preacher. "Such questions spoil the best preaching in the world." So such questions may spoil the best theories in the world, but common sense will ask them. It will not believe that blind matter and force, or unintelligent conditions, ever produced such wonderful acts of intelligence.

Blind, Irrational, Insensate Matter and Force.

Not long since, in a public discussion with the leading advocate of evolution, the leading advocate now on the rostrum, at least in the United States, the author invariably presented the issue concerning each phenomenon ascribed to evolution thus: "Can blind, irrational, insensate matter and force evolve such a phenomenon?" His opponent complained bitterly. He said it was like attempting to excite the *odium theologicum* against an opponent. It was attempting to create a prejudice against evolution by calling it bad names. It was an attempt to do what I censured so severely in the infidel—attach absurdities to the theory, load absurdities onto it, until I made it absurd and ridiculous, and broke it down. In reply, the author asked him if the expression was not literally true? To get rid of intelligence in the cause of existences and phenomena, had not he made matter and physical force the origin of every thing? Had not he emptied them of all intelligence, and severed them from all connection with intelligence in the beginning of evolution, and in the course, until man was evolved? He could not deny it.. Then the author continued: "Is not matter, is not physical force, insensate? Do they have sensation at the commencement of evolution, or during a larger portion of the course of evolution? If they do not, then they are insensate. Are matter and physical force rational? Were they at the commencement of evolution? Were they rational during the course of evolution?" He dare not say that they were. Then they are irrational.

Are they endowed with foreknowledge, prescience and prevision? Were they at the beginning of evolution or during evolution? Then are not they blind? Then when I call them blind, irrational, insensate matter and force, I speak the exact truth, and I present the issue just as it ought to be made. The issue that the evolutionist ought to be compelled to meet is this: Were these phenomena and existences evolved out of blind, irrational, insensate matter and force, and by blind, irrational, insensate matter and force? He ought not to be allowed to evade the issue, cheat his readers out of a sense of the utter absurdity of his theory, and to cover the nakedness of his system by any subterfuge. Neither by taking refuge in an Inscrutable Power, as does Spencer and Huxley. Nor by audaciously foisting into blind, irrational matter and force all that he wants to draw out of them, as does Tyndall. Nor by such learned phrases as homogeneity, heterogeneity, differentiation, integration, etc., with Spencer. Nor by such convenient personifications as laws of nature, nature of things, or natural selection, or survival of fittest, etc., with which Darwin hides out of view the nakedness of blind, irrational matter and force, and substitutes between them and the reader words, such as selection and law, that the reader unconciously accepts as the cause of the phenomena, because they are acts of intelligence, without asking,: "What selects? What makes the law?" If he were to do this, and remember that it is blind, irrational matter and force that does all this, that is really the source of all these wonderful phenomena, he would reject the speculation as an insult to his common sense.

If these evolutionists were compelled to tell the naked truth, and not allowed such subterfuges: if they were compelled to write and say "blind, irrational matter and force," instead of those delusive phrases, "natural selection," "laws of nature," "natural law," their books would never be written, one syllable of them, nor would one of them ever utter a sentence in favor of evolution. Let one of them place himself before the audience and use the terms "blind, irrational matter and force," where the theist uses "God," as he ought if as honest as the theist, and he would break down under the sense of the utter absurdity in ten minutes. Yet this is just what he should do. In setting up evolution as the true theory of the origin of existences and phenomena, instead of creation by God or intelligence, common honesty and truthfulness demand that he say candidly "blind, irrational matter and force" evolved each existence and phenomenon out of blind, irrational matter and force. To this issue he should be held, as Sisyphus was held to the task of rolling the stone up the mountain side. Let the reader in reading these speculations continually set to one side all such subterfuges and evasions, and carefully and resolutely place in the speculation in their stead what truth demands should be there, "blind, irrational matter and force," and he will never read through a single book, nor listen till the close of a lecture. The absurdity of this mockery of all reason would be too overpowering to be borne.

Parolles and His Drum.

One of the most contemptible characters in Shakespeare is the braggart Parolles. He was continually boasting of what marvelous exploits he could do, and had done. The little he did was magnified into a prodigy. His commander had the unreasonable injustice to ask him to perform one of these miraculous exploits, as a proof that he had done what he claimed he had done, and a proof that he could do what he boasted he could do. In like manner we read, in speculations of evolutionists, of what conditions have done, and of what they can do. It is assumed they have done certain things in the past, as serenely as though the speculator had been eye-witness to the transaction. It is assumed they are doing now, or can do certain things, as serenely as though the speculator had witnessed similar things a thousand times. Some times a small variation or change is cited, and then spread over all the phenomena of nature. Or a multitude of such small variations, and all nearly alike, are cited as though a million persons of one trade could do the work of all trades. Or a slight change in an organ is cited as proof of how it was produced, as if the effect of the sun in changing a person's color would account for the individual. Or things that are connected with the variation are assumed as the cause of the variation, and of what is varied, because they happened to be connected in time, like the Tenterden steeple was the cause of Godwin's sands, and also created the sand and the land that was changed into them.

These speculators should be made to show, by actual demonstration, that their conditions and causes can produce the phenomena, and how they did, and that they actually did so. The reader is bewildered with phrases and speculations and strange phenomena, and allows the evolutionist to assume the whole question. If the reader were to stop and take such an organ as the eye, and study it until he understood it, and then attempt to trace out the formation of that organ, by the operation of the unintelligent conditions of evolution out of blind, insensate, irrational matter and force, he would stop before he commenced so absurd a task. If the evolutionist were like Parolles, compelled to apply his theory to such a case, and trace out and illustrate its operations in the evolution of such an organ, he would shiver over it as Parolles did over his boast to recover his drum. That the reader may appreciate the utter weakness and nakedness of the system, let us undertake to apply it. Let us take the whale. It is an immense warm-blooded, air-breathing mammal, that brings forth and suckles its young, as does the cow, or any land mammal. This enormous animal, that has been found one hundred feet long, and of the weight of an army of land animals, has been evolved by the operation of unintelligent conditions, influencing blind, irrational, insensate matter and force. What was the primordial germ of such an animal? Was it the same as that from which the mouse descended? Where did it begin its course of development? On land, as conditions would demand? If so, how came it ever to take to the sea? This is in utter violation of all conditions and natural selection.

If in the sea, how did such conditions develop an air-breathing warm-blooded animal that procreates and brings forth and suckles its young like a land animal? These results are in direct opposition to any and all conceivable effects of the conditions. Then the same conditions produced at the same time, out of other primordial germs, cold-blooded, water-breathing animals, that produce eggs, and have no care of their offspring, nor a particle of the intense maternal instinct there is in the whale. Will some one who believes that evolution is as clearly established as the Copernican system trace before us the evolution of the whale, as the astronomer runs back through the motions of the heavenly bodies, and tells when there were eclipses and transits? That is the boast. It is as clearly demonstrated as the Copernican theory of the universe. Then take the family of birds. We can see or conceive of the locomotion of animals on land, or of fishes and animals in water. But the locomotion of an animal many times heavier than air, through the air. What could give any tendency to such locomotion to a land or water animal? Then several of the most difficult and profound problems in mechanics have been solved as man can not, with his thousands of years of study, with all his intelligence. Then the primordial germ or type from which the bird was evolved. Did it once move on land? If so, how came it in violation of all conditions and natural selection to take to the air? If originally an air animal, what solved all these profound problems, and adapted the bird to the air? Or if a land animal, did unintelligent conditions operating on blind, irrational matter and force, solve these problems? Then how did conditions compel a land animal to leave the land, and undertake that inconceivable locomotion through the air?

What gave a tendency in that direction? What kept up this tendency? What preserved and co-ordinated results in the evolution, for such a vast period of time? Let us conceive for a moment of this nondescript land animal ceasing to use its nondescript limbs on land, the place they are adapted to, and to which every condition would direct and confine them, and practicing the attempt to use them in the air, for which they were utterly unadapted, and persevering in such useless attempts for countless cycles of time, for these changes have been so gradual as to be imperceptible during historic and geologic ages, until at last all this struggle, that was utterly useless to countless generations, became useful! There could be no use of the organ, or tendency to use it until it was complete and fit to be used. Use can not develop an organ, for it can not be used until it exists to be used. Hence the above course of development of an useless organ is the height of absurdity. The author once presented this case to an eminent lecturer on evolution. He sneeringly and discourteously replied that evolution did not teach or suppose any such case, and taunted the author with his ignorance of evolution. Will he or any other one tell us *what evolution teaches or supposes in regard to the evolution of the wing of the bird?* Does it teach any thing at all, except perhaps to assert the evolution of the wing by unintelligent conditions during an immense period of time, when it can not give a ghost of an idea of how it was done, or proof that it has been done, and common sense can present thousands of the clearest and most palpable reasons that render such an evolution impossible and inconceivable?

If the evolution hypothesis be as clearly demonstrated as the Copernican System, will the demonstrator trace the evolution of the wing of the bird back as the astronomer does the relative positions of the heavenly bodies? Let us take one more illustration still more wonderful. Let us follow the evolution of the eye. We have already shown that evolution can not account for the origin and development of the senses or sensation. Nor can it for the organs used in sensation. Away back in the eternal past, a nondescript something, evolved out of a germ, was affected in an unusual and entirely new manner by light. By some means one particular part of its organization became unusually sensitive to light. This tendency continued. This in the course of countless generations led to the formation of a nondescript aggregation of matter, in a certain part of this nondescript's nondescript organization, that modified force in such a way as to evolve the sensation of sight. This continued until we have that wonderful organ the eye, and all its varieties. Some have one lens and others thousands. Some see by night, others can gaze on the noonday sun. Some see in water, others in air. Some see but a few feet, others like the eagle's can rival a telescope. Now let us ask some questions, even though it spoils the best theory in the world. How came that nondescript's organization or the matter in it to be sensitive to light? How came there to be any thing there to respond to light and have any sensation? Then how came such slight influences to be perpetuated and co-ordinated in an ascending scale for countless ages, through countless generations, until they become even in the slightest degree useful? How came the profound ideas of reason, displayed in the construction of the eye, to be realized? Then the different ideas of reason realized in the construction of different kinds of eyes? Then how came the most rudimental eye to remain in existence for countless ages, and be unchanged down to the present time, as is the case? How came all the intermediate varieties of eyes, as you call them, to remain unchanged through all conditions and changes of conditions down to the present, as is the case? Conditions are not producing one particle of these changes that you claim evolved the eye, and have not during the countless ages of geologic epochs.

Then so delicate and sensitive is the eye, that it can not be changed, or will not admit of change of conditions. Any such attempt destroys it. All talk of evolution of so sensitive and delicate an organ by conditions is absurd. And another trouble arises, also, in this supposition. Away back, early in the geologic ages, at the time when, if this theory be true, if there were any eyes at all, they must have been rudimental, is found the trilobite, a highly organized animal in certain respects, with a perfect eye of the highest order, and this trilobite is absolutely without any ancestral forms or typical progenitors. It appears suddenly without any preceding lower types, with a perfect eye of the highest order without any previous rudimental eyes, out of which it was evolved. Such facts will spoil the best theory in the world, unless we say, as did the Frenchman, "so much the worse for the facts." Such are a few, and only an infinitesimal part of the difficulties that beset our scientist Parolles, in his attempt to capture his evolution drum. But let him be held resolutely to his work. Let him tell us what sort of thing this inconceivable nondescript, that was varied by conditions until all we see were evolved out of it—what sort of thing was it? Where did it come from? Where did the conditions come from? How came it to be possessed of this wonderful power of adaptability to conditions? What preserved and co-ordinated the results in the ascending scale? How came the same conditions to produce such contradictory and opposite results? How could they evolve out of matter and force what was not in them, or in themselves? Have conditions one particle of causal efficiency? Can they cause any thing? Can they vary any thing? Can they produce the thing varied? Can they do more than to permit the variation to exist when it has come into being independent of themselves? Can they produce just the opposite of themselves? And, above all, let the advocates of this demonstrated theory, trace before us the course of evolution, and prove that conditions could produce such results. Show us how they did it. And prove that they did it. Then we will have a demonstration such as we have for the Copernican system. Then let the reader avoid being deceived by the various subterfuges of the evolutionist, and hold the theorizer to the practical test. "The proof of the pudding is in the eating." Show us how this could be done, how it was done, and prove that it was done so. This is the method of physical science. The evolutionist attempts to explain the origin of all existences and phenomena by physical science. Let him conform to its methods, and do it as physical science demands. The theory of creation, resting in rational thought, appeals to rational thought and not to physical science, as does evolution.

Proper Tests of the Two Theories.

Let us anticipate a retort that may be made by the evolutionist. He may say, "Will you give us a practical illustration of your theory of creation, such as you demand of us? When we see something created, we ought to accept your theory, and not till then, according to the ordeal to which you subject mine. Serve both alike?" We reply that no such retort can be made, nor such demand made, for the two theories do not rest on the same methods of proof. The creation theory rests on the methods of rational thought. It is based on the deductions of reason, from the phenomena and characteristics of the phenomena. The evolution theory appeals to conditions now in existence as causes. It proposes to solve the problem by physical science, hence it must use the methods of physical science, and present the proofs of physical science. If the author were to attempt to convince a man of the existence of spirit by the methods of rational thought, appealing to phenomena and their characteristics, and to deduce the existence of spirit as a rational conclusion from the phenomena and their characteristics, and a spiritist were to come forward and say, "That is not the real proof. We know that there is spirit, because spirits materalize themselves, and we can see, feel and hear them;" the inquirer would say, "Well, materialize a spirit, and let us see, feel and hear it, and then we will have your proof, and not till then." Such a demand would be just, but no such demand could be made on me. I had promised only rational proof. Indeed, I would deny that such proof, as the spiritist offered, could be given, or that it was a question susceptible of any such proof.

In the case before us we deny that the question of the origin of existences and phenomena can be settled in the way in which the scientist undertakes to settle it. It can not be settled or tested by his methods, for it does not furnish the data that such methods require. The scientist admits that the genesis of a new species, or a new existence or phenomenon, is something of which he has no experience or knowledge. Then he can not apply his methods, for he has not the data. Until he has such data, he can do nothing with the question, and is undertaking what he is utterly impotent to do. As it stands at present, he can only furnish us the phenomena as they now transpire, and have,since long before human experience, and their nature and characteristics. Then from these, reason, as a question of inductive reasoning, rational thought, must settle the question. Science stops with furnishing the phenomena and their nature and characteristics. Reason does the rest. But when the scientist claims, as did Huxley, to give a demonstration by the methods of physical science, to solve the question by the methods of physical science, we have a right to insist that he fulfill his promise. As in the illustration, we say to him, "Sir, prove that your conditions that are in existence and operation now, and must produce the same results now, if they ever did, *can* produce such results. Show us how they did it. Prove that they did. Prove to us that such causes produced such effects. That the phenomena were produced by such causes. Give us the practical proof demanded by physical science, such as is given by the astronomer for the Copernican system, for you assert you have the same proof." Such a demand is fair, and justice demands that it be made and met, since the evolutionist promises just such proof.

But no such demand can be made of the creationist. He professes to give no such proof. His course of proof admits and demands no such tests. He admits that there can be no practical test, in the lower use of the word practical, for we have no such phenomena transpiring now. He claims that the question can not be settled by any such method. He claims that it can only be settled as a question of rational thought, by inductive reasoning. He takes the phenomena, and their characteristics, and using the fundamental principle of all inductive philosophy, he determines the cause from the nature of the effects. He gives the highest method of proof, the purely rational, that which appeals to reason in its highest and noblest exercise. His conclusion is the only one that reason can accept, the one that reason gives by every law of its being, and with every power of its existence, and is reached in the only way that the conclusion can be reached, as reason declares. Hence, we insist on the test we have presented, for that is what the evolutionist promised, and insist that he can give no such test, and that the question admits of no such proof. We give the proof we promise, and the only proof the question admits of, and the proper test of our proof, and the highest proof and test.

Evolution Hypothesis and Copernican System.

When atheists are asked why they do not accept the idea of God, if human reason be their standard, since reason has so universally believed it, they reply that they are no more bound to accept it than they are the old idea, once so prevalent, that the earth is a plane, and the center of the universe, and the sun revolves around it. They are no more bound to accept the theory of creation, than they are the Ptolemaic hypothesis which elaborated and undertook to make scientific the above popular notion. Huxley presents the evolution hypothesis as the Copernican substitute for the Ptolemaic theory, creation. But the cases are not parallel. The idea of God is, in one sense, an intuition, an immediate intuition. Man has an intuition, a constitutional tendency, to worship, to have aspirations for higher, superior beings. He has no such aspiration toward the old idea of the shape of the earth. Again, the data and course of reasoning are not the same. One is a false sense perception of phenomena The other is a clear deduction of reason from characteristics of phenomena, concerning which there is no misconception, for the atheist himself ascribes them to the phenomena. There is not the remoteness in one case that there is in the other. Then, again, when the evolutionist explodes the creation theory, as the Ptolemaic hypothesis has been exploded, we will abandon it. And when he demonstrates it, as the Copernican system has been demonstrated, we will accept the evolution hypothesis. This illustration of the evolutionist, and the comparisons he makes in it, are rather shrewd, but are based on a rather impudent assumption. As matters stand the creation theory occupies the position of the Copernican system. It accords with the highest ideas of reason, and is verified by them. The evolution hypothesis occupies the precise position of the Ptolemaic hypothesis. It is not based on the highest and broadest deductions of reason. It is contradicted by palpable demands of the problem. It is verified by no true scientific method or observations. The evolutionist should change places of the theories in his illustration.

Another Absurdity in Illustration.

A prominent infidel lecturer undertakes to illustrate the absurdity of the design argument, thus: "The design argument claims that because we see order in nature, as we do in man's works, we should reason that they had like causes, intelligent causes. According to this reasoning, if I see a rat hole, and learn by experience that it was made by a rat; and I see Mammoth Cave, an almighty big hole, I should conclude it was made by an almighty big rat." In the first place the word rat, on which he makes his ridicule turn, and which is the gist of his reply, has no place in the illustration. It is introduced to throw ridicule on what can not be met by argument. We do not, in the design argument, say that an almighty man created the universe, but absolute intelligence. Intelligence is the only point in the argument. Then the illustration is not germain. If the same characteristics are in one effect as in the other, we would conclude, and correctly, that as one was produced by intelligence, it matters not whether of rat or man, so must the other be. The species of the organization of the intelligence has nothing to do with the argument. The argument should be, "If we find certain characteristics that can be traced to intelligence as their only conceivable cause, in one case, and then find the same characteristics in the other case, we should ascribe them to a like cause, intelligent cause." Then the absurdity is in an absurd element that the skeptic introduces into the illustration that is utterly foreign to it. And also the illustrations of cave and hole are not analogous. But we affirm that intelligence caused the cave, and the only difference is that a vastly greater intelligence operated, and used second causes to produce a vastly greater result. But the evidences of intelligence are as clear in one as in the other, and vastly more palpable in the case of the cave, and of an infinitely higher order. We notice these attempted evasions to show that in all such cases the infidel either assumes the point at issue, as in the use of the Ptolemaic and Copernican theories, to represent the creation and evolution theories; or he introduces some foreign element that is absurd, and undertakes, in this way, to prove that the idea he is opposing is absurd. He rarely attempts to meet the argument fairly, and to set it to one side by fair reasoning. No set of reasoners need as close watching as these men, who are so scientific, and are continually criticizing their opponents, for their unscientific methods.

Review of Huxley's Demonstration of Evolution.

The most important and exciting event that has transpired in the scientific and literary world during the past autumn, was the visit of T. H. Huxley, the eminent English scientist, author and lecturer, to our country. What rendered his visit one of great interest, and clothed it with special importance, was the announcement, made in advance, that he would deliver three lectures, in which he would do what the world has long been demanding, and will continue to demand, before it will accept the evolution hypothesis, and what its advocates have been so long seeking and attempting, a demonstration of the hypothesis known as the evolution theory. Every one expected from such an announcement, and had a right to expect it, that undeniable facts would be presented, and that the theory of evolution would be deduced from them in the clearest and plainest manner, and established as a clearly proved scientific theory, and a demonstrated system of scientific truth. The reputation of the lecturer, as the ablest living lecturer and advocate of evolution, raised the expectations of all parties very high; some in eager anticipation of having at last what they had long sought and desired in vain; and others in gravest apprehension lest great harm should be done to what they regarded as the highest interest of millions. Since the subject is a fiercely contested question, very clear and thorough work would have to be done, to accomplish what the lecturer promised. Since evolution is advanced by its advocates, and was presented by Huxley, as the opponent of the theory of the creation of all existences and phenomena by intelligence, and was presented by Huxley as the solution given by science to the problem of being, the attempt was to demonstrate that the theory of evolution is the true and scientific explanation of the existence of all existences and phenomena.

Huxley should: I. Have stated in all its magnitude, in clear outline at least, the demands of the problem, for which he offered evolution as a solution. As it is very earnestly disputed that it is a solution of many, and the most important elements of the problem, he should have stated the problem carefully, and been especially particular in placing the disputed elements fully before the audience, so that when he was done they could compare the solution with the problem, and especially these disputed elements, and decide whether the theory of evolution was a solution of the problem. II. If he undertook, as he claimed he did, to state all the conflicting solutions of the problem, he should have stated all of them, and fully and fairly, placing all before the audience in all their essential features, and in their full strength. III. If he undertook to disprove all of them except evolution, as he claimed he did, he should have clearly and fairly shown that each of them, fairly stated in all essential features and full strength, failed to meet the demands of the problem. IV. To demonstrate that his solution, evolution, did meet the demands of the problem, he should: 1st. State accurately and carefully the facts on which he based his theory, establishing that each and every one was a fact clearly proved. 2d. Show that his theory was an undoubted deduction from the facts, and clearly established by them. 3d. Show that his theory, thus established, solved the problem—met all the demands of the problem. He should be especially careful to avoid two errors. First, he must not incorporate into his theory an idea that was not clearly established by the facts he cited to demonstrate it, thus extending it beyond what was established, or was a legitimate deduction from the facts. Second, extending his theory over what it did not cover, or, in other words, claiming that it solved things of which it was no solution. He should be careful to confine his theory in his statement to what was established by his facts, and in application to just what it met and explained. V. He should have passed the problem in detail before his hearers, and applied his theory to each element in detail, and proved by practical demonstration and illustration that it was a solution of each element of the problem. And in regard to the elements concerning it, which it is denied that evolution was or could be a solution, he should have examined them carefully, and have shown that such objections to his theory were not valid. Either that it did meet and explain these elements of the problem, or that no such issue was to be met, and there was no such element to be explained. The audience and the world had a right to expect all this from one of the reputation of the lecturer, and who had studied the subject more, and was regarded as one who understood it better than any person living, with perhaps one or two exceptions. His promise to place the evolution hypothesis on the sure basis of demonstration, on the same basis as the Copernican system, involved such a work. Above all, the transcendent importance of the theme he discussed, in its direct or indirect bearings on science, morals, religion and thought, demanded all this work at his hands.

We propose now to examine his work and test it, and see how near his demonstration came to meeting these demands that his promises authorized the world to expect from him and exact at his hands. Did he state the problem fully and clearly, especially the disputed points, the ones at issue? I think no one dare say that he did. The issue or problem, the origin of all existences and phenomena, involved, at the least, the following elements: 1. What was the origin of matter and force? Are they self-existent? If that is claimed, it should be shown how they can be, and especially that they actually are so. If not self-existent, then it should be stated clearly what is their origin. As this is the question of questions, the fundamental question, it should be clearly met. 2. What was the origin of the essential properties of matter and force? Are they self-existent? Or did they proceed from some antecedent source? If so, what? 3. The co-ordination, adjustment and adaptation of these essential properties into an order, system and method, with law and plan; whence came it? 4. The elementary substances of matter and their peculiar characteristics, whence came they? 5. The co-ordination and adjustment of these elementary substances into an order and system with law and plan, whence came it? 6. The planetary and stellar worlds and systems, their forms, orbits, motions, distances, masses and relations, whence came they? 7. The co-ordination of all these things mentioned in the previous six queries, in exact mathematical law and proportion, in numerical expression and magnitude, and geometrical form in a system, realizing the most exalted and abstract ideas of reason, in mathematics, harmony and law, whence came all this? 8. Chemical action and affinity, and its almost infinite and infinitely varied results, and its wonderful law, whence came they? 9. The co-ordination and adjustment of all these in a perfect system with perfect plan and law, and the co-ordination of all nature to chemical action, affinity and its results and law, whence came they?

10. Crystallization, the result of chemical action, with its laws of number and proportion, and of geometrical form and angles, all realizing the most exalted ideas of reason in proportion, order and harmony, whence came they? 11. The co-ordination of all these inorganic processes and results to each other and the whole system, whence came it? 12. Whence came that wonderful phenomenon we call vegetable life or vital force? 13. Whence came the vegetable cell, germ, seed and plant, the vegetable organisms built up by this life, and in which it is manifested? 14. Whence came animal life, so wonderful in sensation, instinct, understanding, power of voluntary motion and locomotion? 15. Whence came the animal cell, germ or organisms built up by this animal life, and in which it is manifested? 16. Whence came sensation, instinct and understanding, so varied and wonderful in different animals? 17. Whence came all the orders, families, species and varieties of vegetable and animal life and organisms? 18. Whence came man's organism and brain, so wonderful and so different from all animals? 19. Whence came reason, moral and religious nature and character, and their results? 20. Whence came the realization of the most exalted ideas of reason in co-ordination, adjustment, arrangement and adaptation into order, method and system, with law, plan, design and purpose, with prevision, provision, alternativity, and choice, beauty, harmony and utility in the absolutely primordial constitution or absolute beginning of things, in the course of evolution, in each and every step in it, and in the present order of things, in each existence and phenomenon, and in the universe? Whence came all this? These are the disputed elements of the problem he proposed to solve, and his solution had special reference to these.

If it be said that his undertaking did not require all this, and that his promise did not require him to state all these issues as elements of the problem, we reply that the theory of creation claims to account for the existence of all being and phenomena, and to explain every one of the above issues. So Huxley himself said in his lecture. He offered evolution as the scientific substitute for the theory of creation, hence he offered it as a solution of every one of the above-mentioned issues. Evolutionists offer evolution as the scientific solution of all these issues, and as the scientific substitute for the theory of creation, and invariably use it as such. Huxley assumed that it is a solution for all these elements in the practical use he made of it, in the scope he gave to it, and in his offering it as the solution given by science instead of the theory of creation. Such, then, were the elements of the problem he proposed to solve, and demonstrate that evolution is the true and scientific solution. As all of these issues are subjects of earnest controversy between the conflicting theories of creation and evolution, Huxley should have stated them all clearly and fully, and frankly avowed his task to be to explain them by evolution. Huxley made but a partial statement of the problem in the beginning, stating but a few issues, and these as weakly as possible, as though he wanted to have as little to meet as possible; and in his demonstration of evolution, and his application of it, he reasoned as though but one element were involved in the entire problem, and this, the origin of species, is the least important and least difficult of any. A person reading his demonstration in the second or third lectures would suppose that his work was simply to show how variations and species were produced. He would not dream that he was trying to give a substitute for the whole theory of creation.

Did he state all the conflicting theories as he claimed he did, and state them correctly, fairly, and in their full strength? Without inquiring whether the interpretation he gave of Milton's poetic description of creation be correct, or discussing now whether it be, as he by cowardly covert indirection sneeringly insinuated the theory of creation presented in Genesis, we most emphatically deny that he stated the theory of creation as it is held by its advocates, with scarcely an exception. In addition to what he presented, there are the following theories: 1st. God created matter and force and implanted in them, and stamped upon them, invariable necessary laws, in accordance with which they have evolved all things, and that he acts only through these laws, and in them only, in their first constitution. 2d. He created matter and force and implanted in them, and stamped upon them, invariable and necessary laws, in accordance with which they have evolved all existences and phenomena; but God is ever present in these laws, and through them his power evolves all things in accordance with his will. Persons who are full and complete believers of the evolution of all things out of matter and force, hold one or the other of these theories. 3d. The author holds the following theory: God created matter and force and implanted in *them, and* stamped on them, principles and laws in accordance with absolute reason, and in accordance with these laws of reason they operate and have evolved portions of the phenomena that have come into being since creation, but such evolution has been within certain limits. There has been development from the first creation, but it has been development that was in its most important features development by creation, and by successive steps. There has been evolution of the plan of Infinite Wisdom and Power, and evolution of existences within certain limits, but God has created directly each new and higher step of existence when they appeared; such steps as are indicated by the twenty elements of the problem as enumerated.

There was evolution of the Divine plan in the course of development, but by successive steps, by direct creation, with evolution by variation between these steps. This was not without cause, but had Absolute Reason as its cause. It was not without law, but was in accordance with law, the highest law, law of Infinite Intelligence, and is the only theory that has any law in its real meaning, and the only theory that has a cause, in the true sense of the word cause. The Creator brought into being matter and force. He gave to them perfect laws. He created the essential properties of matter and force. He created the elementary substances and their characteristics. He created chemical affinity and its action and crystallization, and he created life, both vegetable and animal. He created each species, by creating perfect the first of each species at the beginning of the species. Then all succeeding individuals are produced by the action of the laws he established, and variations within definite limits. God is potentially and actively present in government and providence in the ongoings of nature. Government, providence, prayer, inspiration, revelation, atonement, mediation, and forgiveness are not capricious or without law, or in violation of law, but are a necessary part of the highest law, law of rational beings, and are a part of its perfection, and necessary to its perfection. There has been rational, moral, and religious development in human history, but religion, morality, and reason, and those catholic ideas of reason, religion and morality, mentioned above, are the factors of such evolution. They must be the factors in an evolution of intelligences, a development of the reason and moral nature of intelligences, controlled by an overruling intelligence. I believe this accords with the teachings of the Scriptures, and is the teaching of the Scriptures. I believe this theory of creation by successive steps, of evolution by creative steps, is the theory of the first chapter of Genesis. I refer the reader to the explantion of that chapter given in a former article.

Then we impeach Huxley's statement of conflicting theories as imperfect, omitting several, and as unfair and incorrect. We object to the unfairness and untruth there is in his representing the theory of creation as being without law, or in violation of law. It is in accordance with law, the highest law, law of Infinite Wisdom. The theory of evolution is without law unless it be the law of blind, fatal necessity, which would admit of no change, and invariably produce the same results. In that case there could be no evolution. As Huxley claims an evolution out of blind, irrational matter and force, and by means of them, of all existences and phenomena, he must have change, and the only change and operation there can be in a system based on blind, irrational matter and force, and by means of them, is the chance fortuity of the blind, aimless ongoings and happenings of blind, irrational matter and force. Law, in a system of evolution of blind, irrational matter and force, and by means of them, is an absurdity, is impossible and unthinkable. The theory of creation and control by Intelligence is the only theory in which there can be law in any sense, and is the only theory that is in accordance with law, has law. We object also to the assumption, so unfair and untruthful, that the theory of creation brings existences and phenomena into being without a cause, or in violation of the law of causation. This is implied when he covertly insinuates that it implies that there was a time when events did not follow a fixed order, and when the relations of cause and effect were not fixed and definite, and did not control as they do now. The theory of creation is based on the truth that all existences and phenomena had a cause, an adequate cause, an intelligent cause, and that events do certainly follow a fixed order, an order established by Infinite Wisdom. The issue between the theories of creation and evolution is not whether events follow a fixed order, or whether they are controlled by law, and have been produced in accordance with law, but concerning what kind of law. Evolution says a law of fatal necessity, of blind, irrational matter and force, in which case there could be no variation, no change, no evolution. Or a law of chance fortuity of the aimless ongoings or happenings of blind, irrational matter and force, which is an absurdity, for in such a case there is no law. We hand back to him, where it belongs, the charge of having a theory without law. The issue between the creation and evolution theories is not whether existences and phenomena have a cause, but concerning what kind of cause. Evolution says matter and force are the cause, when the inertia and passivity of matter and the utter lack of self-direction and spontaneity there is in force, render the idea of their being causes in any sense, or being more than the instrument of causes, an absurdity. Then we hand back to him the charge of having a theory that brings things into being without a cause. It belongs to his theory. Theory of creation has a cause, the only cause there is in the universe, mind, and an adequate cause, an intelligent cause. It has law, the law of Infinite Wisdom, and is the only theory that can have law. We reject, also, as untruthful and an insult, the cowardly insinuation that the theory of creation is to be placed on a level with the idea that perhaps there was a time when two and two did not make four.

We repel, also, the covert and cowardly insinuation against the honesty and intelligence of believers of the Scriptures, in the remark, that scientists can only stand by and admire the flexibility of the Hebrew text, that admits of so many and such conflicting interpretations. It is a fact that language is flexible, and admits of many interpretations often. He professed to be very honest and candid in his lectures. He was excessively cautious and careful to be as clear and precise as he could be in his statements. And yet already it is a fact that many and conflicting interpretations have been given to his language, so deliberately matured, so thoughtfully worded and expressed, to make it so clear there could be no mistake, and that all must understand it correctly. Were there arguments in sneers, we might rehearse the one hundred and fifty exploded, conflicting, and contradictory hypotheses in geology, that have been abandoned in as many years, and as many in physiology, also in chemistry, and so on with the entire round of sciences, that are practical knowledge, and so clear and precise, definite and harmonious, and marvel at the wonderful flexibility of the inflexible record of nature, that is so definite, clear and uniform. Says a late writer, "We have hardly mastered a theory until we are called on to abandon it for a new one." We might rehearse the multitude of conflicting theories and interpretations of nature, that are now fierce matters of dispute between these scientists that have every thing so clear and definite. We might rehearse many theories that have been advocated at different times by the same person, and even by the lecturer himself, that are conflicting and contradictory, and marvel at the flexibility of this inflexible volume of science that admits of so many and so conflicting interpretations by the same person. But such sneers and insinuations are not argument, nor are such covert misrepresentations of an opponent's position as abound in this lecture. Huxley injured himself and his cause. He presented as Milton's theory, what he intended his hearers to understand to be the teaching of the Scriptures. He covertly insinuated that he dare not say that it was the teaching of Genesis, on account of the dishonesty and sophistry of believers of the Bible, who interpreted Genesis in any way so as to save the inspiration and truthfulness of the record, regardless of what must be its real meaning. It would have been honest and manly to have said what he meant, as an honest, truthful, courageous man. Then his hearers could have respected him, and not have felt a feeling of contempt for the cowardice that said in covert insinuations and sneers what it did not dare to say openly. It was the cowardice and treachery of one who stabs under a flag of truce, and while rehearsing a treaty of peace, and uses the staff on which the flag of peace is fastened as the weapon to pierce the one he is deceiving by means of it.

Then the unfair and dishonest representations of the lecturer in regard to what the theory of creation is, in regard to its teaching that things once did not follow a fixed order, its being a theory without law or in violation of law, that it taught that events happened without a cause, that there was a time when the relations of cause and effect were not fixed and definite as now, and that the theory was on a level with the assumption that two and two might once have been something else than four, have injured his attempt and himself, and must forever after cause all fair-minded men to have a far different opinion of him from what his pretensions claimed for him. His attacks on the theory of creation presented in Genesis were but three: 1st. It represented existences as coming into being instantaneously and by creation. Science teaches they are evolved gradually. 2d. It represents the time as but six days of twenty-four hours, if the account be honestly interpreted. 3d. It does not present the order of creation that science teaches. In regard to the first, we reply that the account does not conflict with the idea of creation by evolution within certain limits. It represents new types of existences as coming into being instantaneously, and by creation, and in their highest perfection at first. So does geology as far as its records go. Geologists meet with each new type suddenly, in its highest perfection, without a trace of connecting links between it and lower types. In regard to the second, we reply that in the Hebrew Scriptures the word *yam*, here translated day, has these meanings: 1st. The time from sunrise to sunset. 2d. Twenty-four hours. 3d. Past or future time without limit. 4th. A future prophetic period of indefinite length. 5th. An epoch or period of time in history. 6th. A season of the year. 7th. A period of life, as old age. 8th. A specified time of indefinite length. Scores of instances of many of them, and many of all of them, could be given. It has such meanings in the English, and all languages. Then language is flexible and susceptible of different interpretations. In the second verse of the first chapter day means an indefinite period. In the fourth verse of the second chapter, where its use settles its meaning in this account, it means an indefinite period, the time of God's ceasing from creation in which we are living, and which is not ended yet. This determines the duration of the other days. Then we object to the unfairness that forces on to the word an absurd meaning, which the context does not require, but forbids, evidently to destroy it. It does not allow the fair principle to be applied, that the writer is presumed to speak sense, and such meaning must be given to his words as will make sense, unless the context forbids. There is no necessity for giving such meaning in this account. Its being prophetic vision forbids such a meaning, for *day* does not have such meaning in vision and prophecy. The context gives the meaning, period—and compels such a meaning, and forbids the idea of twenty-four hours.

In regard to the charge that the order contradicts that of science, we can not enter into an elaborate detail, but will repeat the remark made elsewhere, that the account is a bold poetic description, in general outline, of the leading events of creation, as they would appear to an eye-witness in prophetic vision, written for a people destitute of all science of modern times supposed to contradict it. Hence it is unjust to insist on examining this account as a literal, scientific account in which scientific precision in order and detail are attempted. General agreement is all that is to be expected. There is this agreement, if we can accept the testimony of such geologists as Miller, Hitchcock, Silliman, Guyot, Tenny, Dana and Dawson. Several of these are the masters in geology. Several of them are the greatest living geologists, and the masters of Huxley in geology. Dawson, in his *Archaia*, very fully elaborates and establishes this substantial agreement. So does Dana. These are the greatest of living geologists. Dana thus interprets the record in Genesis: I. *Inorganic Era.* 1st day; creation of cosmical light. 2d day; the earth divided from the fluid around it, or individualized. 3d day; first, outlining of land and water; second, creation of vegetation. II. *Organic Era.* 4th day; light from the sun becomes prevalent on the earth. 5th day; creation of lower orders of animals. 6th day; first, creation of mammals; second, creation of man. These masters in geology, and of Huxley himself, declare that this accords with the teachings of science, and that no uninspired man could at that day have fabricated such an account, so simple, sublime and grandly correct, and accordant with the teachings of science. I leave these masters in geology to set to one side the utterances of this refractory and presumptuous pupil.

In the second lecture we have an evident cautious preparation of the hearer for the weakness of the demonstration. He tries to raise expectations and surmises, and to prepare the mind to accept them as demonstration. As Iago expresses it, "He is preparing the mind to accept as demonstration what demonstrates but thinly." His course is like that of a troop of elephants in crossing a bridge. They drive the smallest ones over first to see how long the bridge will bear. In this lecture he seems to make concessions that he utterly disregards in a few moments, and during the rest of his argument. He concedes that as far as our knowledge goes, species have been persistent, and have never changed into other species. Then in the face of this he coolly bases his entire argument on the broad assumption that they have not been persistent in any sense, but all have changed, and are the result of such change, and without one particle of proof. He admits, with seeming candor, the utter lack of proof in the geological records, and especially in regard to transmutational links, or transitional forms, or links in the course of transmutation. He then boldly uses this very record, that he has admitted has no proof, as his sole proof, and bases his arguments on the very links that he admits are utterly wanting. He bases his demonstration on these defects in the record, as though he had the missing links, and knew just what they were. He assumes we will find these missing links, and that they will infallibly be of the precise character needed to establish his theory. The theologian can only stand by and admire, he knows not which most, the marvelous coolness or amazing audacity that could pursue such a course when discussing a topic so earnestly contested. He announced that he would place the evolution hypothesis on as positive a basis as the Copernican system of the universe. This system is based on well established scientific truths and observations, and confirmed by the test of long experience and careful study.

He finally announced his method of proof thus: "When we have all the evidence concerning the subject we can hope to have, and it is in favor of the theory, we should accept it.." Does he mean to assert or have us understand that is all the testimony we have for the Copernican system? He says nothing about how much evidence we can hope to have, whether it be much or next to none at all. Nor in what sense it must be in favor of the theory, whether it must clearly teach it, or merely hint it as a surmise or possibility. Suppose we have next to no evidence at all, shall we accept it? Suppose the evidence merely raises a surmise of the possibility of such a theory, are we to accept such surmise? Suppose there are other theories as plausible, or nearly so, what then? He says nothing concerning objections that stand in the way of the theory, and what influence they should have, and wisely, for had he entered that field the objections to evolution would have buried the surmises in its favor, raised by his evidence, deeper than Jove buried the Titans. He relies on the law of circumstantial evidence to establish his theory. The rules for testing circumstantial evidence are these: I. There must be sufficient number of facts favoring the theory to raise a reasonable, a strong presumption in its favor, and they must point very strongly in that direction, before a man is warranted in advancing and advocating the theory, or in demanding that others accept and act on it. In this Huxley's evidence is very deficient. There is not enough to raise a strong presumption, and it does not point in the direction of his theory with sufficient strength to give him any warrant in demanding that we accept his theory, and change our science, morality and religion, and base them on it. II. There must be no undeniable facts that raise insuperable objections, or even strong presumptions, against the theory. In this his evidence is utterly destroyed, for there are multitudes of facts that place insuperable objections in the way of the acceptance of his theory. They flatly contradict it. III. There must not be, as a necessary or logical part of the theory, when logically developed and fairly carried out, the absurd or false, either as a part of the theory, or as a necessary deduction from it. In this Huxley's theory is fatally defective. When stated fully and consistently, also when logically carried out, it necessarily involves the absurd, the contradictory and the false. IV. The conclusion must be based on positive testimony and not on supposition. Supposition must not be used as fact, or as a basis for the conclusion, for such supposition may be false. V. The conclusion or theory to be established must be the only possible one that will explain or account for the facts. If there be one or more other theories that will account for the facts, the theory is worthless, for the facts admit of other explanations that may be true. VI. The theory must not be elaborated or expanded in its enunciation beyond what is a fair and necessary deduction from the facts on which it is based. VII. The theory must not be expanded in application beyond what it logically covers, or beyond that to which it is logically and properly applicable. If we admit all that Huxley presents in his lectures to be facts, he makes no attempt to show that evolution alone will account for them. Nor does he make any attempt to show that other theories will not account for them. Nay, more, he scarcely makes an attempt to show that evolution will account for them, and this slight assumption is a *failure.*

He makes no attempt to show that the creation theory will not account for the facts he cites. He merely claims, or assumes the possibility that evolution produced them. We claim that the creation theory will account for them, that it will account for them far better than he claims the evolution theory can. We claim that the creation theory alone will account for them. We have urged over one hundred utterly insuperable objections to the evolution theory. We have reasons almost innumerable and unanswerable, that the creation theory is the only possible theory, the true theory, and the only theory reason will accept. Reason alone can settle this question of the origin and cause of existences and phenomena. Physical science can only place before us the phenomena and their characteristics, but it is utterly impotent to settle the question of their efficient and final causes, or what produced them, and for what end were they produced. Huxley's failure and his course proves this. He cited certain facts, as he claimed. But he did not present a single scientific fact, or particle of testimony, as to what produced the facts. He, as an act of reason, or metaphysics, inferred that they were evolved. This is a practical admission that science can not settle this question and that reason alone can do it. Reason declares that intelligence alone could, and did produce the phenomena, and for certain ends. Then his theory is based on assumptions, and assumptions known to be untrue. He assumed, without one particle of proof, and in the face of all proof, and clear proof, that there were no specific differences between the four animals he used in his lecture. He based his argument on such assumption, and, if he does not assume it, his argument is worthless. There are differences of species wider than there are between the horse, the zebra, the ass, and the gnu. We know that these will not hybridize and perpetuate their kind. We know that one was not evolved out of the other. That there are no transitional or transmutational links or forms between them. There are far wider differences, and specific differences, between the animals he parades before us. Hence, his demonstration is absolutely worthless, for it is based on an assumption known to be palpably and utterly untrue. He exaggerates resemblances on which he bases his theory, and he overlooks or ignores differences that completely overturn it. He overlooks the palpable fact that if resemblances suggest similarity of origin or kindred of species, so do differences suggest difference of origin and difference of species. If more and stronger differences exist than resemblances, they set to one side all deductions based on resemblances. Also, if one impossible difference exists, it sets to one side all resemblances, no matter how many. His reasoning ignores the law of species entirely. Species are defined in four ways: 1st. A species lies within the limits of variation. 2d. Progeny is like the parent. 3d. Species lies within the limit of hybridization. 4th. Species never passes the chasm of sterility. He ignores these laws in his four animals. He overlooks the fact that the same reasoning that proves sameness in species in these cases, will, with far greater force, prove the horse, zebra, ass and gnu to be one species, when we know they are not.

Again, his reasoning ignores the real and vital difference of species. Similarity of structure does not prove sameness of species, nor is structure the highest standard in determining species. The real distinction lies outside of observation. It is in the life-power; that produces progeny like the parent, although the germs of animals be in structure precisely alike. And the same life-power or principle refuses to hybridize in different species, although the germs brought in contact are precisely alike in structure. Here is where the real difference lies; hence his similarity of structure in these four animals is utterly worthless. This real difference that lies outside of observation until we see it in its results in the two cases mentioned, is ignored in his illustration. Again, his reasoning is faulty in this. Pursue the same course by fours up and down the scale of existence, in all orders and species, and it would obliterate all species, all families, all orders. The operation of such a process as he sets forth, would destroy specific differences and all species. It would also destroy all old species, and leave only an infinite variety of new animals, not specifically different from each other. Then, since he found absolutely no transitional forms, or evidences of transmutations between these species, he has not affected the chasm between species one particle. Our Quintius Curtius has cast himself into the yawning chasm, and it still stands as it did before his rash leap. He does not present one particle of evidence of the evolution of one of these animals out of the other. He does not adduce one particle of evidence of transmutation of one into the other. He does not find one transitional form or connecting link. He finds a ladder, with four steps, wide apart, when he should have found an inclined plane. He finds four animals specifically different on the four steps. He does not find one particle of evidence that one of these ever passed up onto the next step, or was transformed into the animal on the next step.

He does not show that conditions produced or evolved one of these animals, or that from which they descended, or produced one of their characteristics. He makes no attempt to show that struggle for life, and the conditions, the factors of evolution accomplished one of these results, or changed either animal or its characteristics into that above it. Even if he had established that these changes were produced, creation might have produced them, and he did not show that evolution did or could. Creation must have produced the animal varied, and the conditions that varied it and controlled them. Then this vital part of his demonstration is an utter failure. Then, it may be a small matter, but it is worth noticing. His *eocene orohippos* figures in his diagrams as large as the other three animals, with which it is connected in the illustration. It was no larger than a fox. How would it have looked to have placed just before an animal as large as a horse, one as large as a fox, and then tell the audience one was the direct descendant of the other? The absurdity of such a conceit is quietly ignored and concealed, by making the diagrams of the same size. If a priest had done this he could have wondered at the marvelous flexibility of diagrams! Then his theory is vastly greater than his facts establish in regard to these four animals, if we concede all he can claim. He claims that one was evolved out of the other in an ascending scale. The facts give it no support, but positively forbid such a supposition. But now comes the most astounding part of this demonstration. Admitting all he claimed in the case of these four animals, he only proved evolution the case of four species. He then expands, without warrant, this meager conclusion over all the species of that family. Then over all species, groups and orders, thus deducing from what established only the evolution of four species out of each other, the evolution of the hundreds of thousands of species of geologic and historic time. And next comes the most marvelous part. Even when he has thus, without warrant, and in violation of all reason, expanded his theory hundreds of thousands of times beyond its proper limit, he has but covered one issue in twenty, and that the least difficult. But he proceeds next to expand it over the entire twenty issues in the problem, when nearly every one of them, singly, is inconceivably more difficult than the one element he could only cover by expanding hundreds of thousands of times his theory, that was not sustained in a single feature by his facts, but contradicted *in toto* by them. Truly one can only stand by and admire the absolutely infinite flexibility of a theory that can be stretched from so small a compass, to cover an infinite number and magnitude of so conflicting elements. And this is accounting for all existences and phenomena, and the twenty elements of the problem of existence and phenomena, as clearly as the Copernican system accounts for the facts of the position and motions of the planetary and stellar systems! And this is demonstrating the evolution hypothesis as clearly as the Copernican system is established!

Then this vaunted demonstration only places before us the fact that four animals of different species of the same order are in the position of four steps of a pyramid. There is no more proof of evolution than there would be to place before us the flail, the threshing drag, the threshing machine of fifty years ago, and one of our present harvesters and threshers. There is absolutely no more proof that one was evolved out of the other, and, above all, that it was evolved by unintelligent conditions, instead of intelligence. There is the same necessity for intelligence in one case that there is in the other, and infinitely higher need of intelligence, for an infinitely higher result of intelligence is placed before us. He started out to find an inclined plane, and found a pyramid, up the steps of which the animals could not leap, nor could conditions, unintelligent conditions, lift them. But suppose he had found an inclined plane, instead of the steps of a pyramid, there would be no proof that each portion of the plane was evolved out of that below it. If, in our illustration of the four machines, we were to place a sufficient number of machines between the four, to reduce the differences to an infinitesimal quantity, so that no one could point out any distinction between any two consecutive machines, would it prove that one was evolved out of the other, and especially by unintelligent conditions? And if he had established that each part of the plane was evolved out of that below it, it does not do away with intelligence, or the necessity for intelligence to originate, plan and control the evolution. Huxley found only the ascending steps of a pyramid, and nature does not leap. This is practically admitted, and he assumes that there must have been intermediate forms that reduced the ascent into an inclined plane. Of this he offered no proof, and all the facts contradict it, but had he found such forms, we still object, nature does not slide any more than it leaps. And if it did, whence came the materials of the pyramid or plane, and the power in nature that slides or leaps, and what co-ordinated these materials and this power in this wonderful pyramid or plane? Does it remove the necessity for intelligence, to constitute, control and sustain nature in its operations, to show what wonderful things nature can do, and to increase their wonder?

The writer has seen envelopes made by hand. A score of processes were gone through by a score of persons. No one would deny that intelligence produced each process and its results. Lately he saw a machine perform the work. A man laid on a table a pile of sheets. The machine picked them off, one by one, and deposited envelopes in piles of twenty-five each, finished envelopes. All that the operator did was to lay down the sheets and pick up the packages. Did that prove that intelligence had nothing to do with the operation, and that blind, irrational matter and force evolved the machine, and blind, irrational matter and force were all that had any thing to do with its operation? On the contrary, was it not the highest evidence that intelligence must have devised the machine, and must control its operations? Were not the wonderful results produced by the machine, so much the greater evidence that intelligence must have invented and constructed it? And does not increase of the wonderful nature of the results, increase the evidence that intelligence must have invented and constructed it, in the same ratio? Then let Huxley establish that nature can do an infinite fold more than we now believe, and he has only increased the necessity for intelligence to constitute nature, and the evidence that intelligence constituted nature. These are two minor thoughts that deserve notice. In Huxley's cases of evolution, there was a retrogression in passing from the animal with several toes to the animal with all united. It was an evolving of the lower from the higher. When he announced his theory in his first lecture, he confessed that it absolutely required long time. When reminded in a note that astronomy and other sciences absolutely refused to grant so long a time, he, in his last lecture, attempted to waive this to one side by bluster. He must either disprove the limit set by these sciences, or give up evolution, or bring evolution within greatly shorter *time*, which utterly destroys it.

Let us now take the two conflicting theories, evolution out of blind, irrational matter and force, and by blind, irrational matter and force, and the theory of the creation of all existences and phenomena by Absolute Reason, in accordance with perfect law of perfect reason, and test them by applying them to the solution of the twenty elements of the problem, as we have enumerated them: I. How came matter and force into being. Evolution either says they are self-existent, and contradicts reason, which says they can not be self-existent, but are subordinate agents, subordinate to mind, created articles, the creations of mind; or it confesses that such an assumption is absurd by ascribing them to an Unknown Power, and, in so doing, contradicts all inductive philosophy, which declares that from the nature and characteristics of what is produced by the Power, we can know the nature and characteristics of the Power. The theory of creation ascribes the origin of matter and force to reason, and thus accords with the principles of true inductive philosophy, which so declares, from the characteristics of matter and force. II. The essential properties of matter and force, whence came they? III. Their co-ordination into a system in accordance with law, whence came it? IV. The elementary substances of matter, and their peculiar characteristics, whence came they? V. Their co-ordination into a system in accordance with law, whence came it? VI. Chemical affinity and actions, and their laws, so varied and wonderful, whence came they? VII. Their co-ordination into a system in accordance with law, whence came it? VIII. Crystallization and its forms and laws, whence came they? IX. The co-ordination of all these inorganic processes, to nature, and to each other, in accordance with law, whence came it? X. The planetary and stellar worlds and systems, with their masses, forms, orbits, distances, velocities and all relations, all co-ordinated in accordance with mathematical law, realizing the most exalted ideas of reason, whence came they?

Evolution says that blind, irrational matter and force evolved all this, when it is an involution, or a depositing in matter and force, what is not in them, and it violates all reason when it claims that blind matter and force realized these highest ideas and acts of reason. Or it ascribes them to what it calls an Unknown Power, when such results reveal the power, and make it known to be intelligence, as clearly as we know the sun to be the source of light. The theory of creation by intelligence ascribes all this to Absolute Reason, their only conceiveable ground, and in obedience to every principle of inductive reasoning, which declares that reason alone realized these exalted ideas of reason in accordance with which nature is constituted. XI. Whence came that wonderful phenomenon we call vital force in the vegetable, or vegetable life? If it be replied that it is the one physical force modified by the organism of the vegetable, we reply that it is now clearly established that the organism is the result of the action of the vital force on matter. XII. Whence came the organism in which the vital force is displayed—the cell, germ, seed or plant? It is now usual to deny that there is a chasm between inorganic matter and physical force, and organic life and organisms. We give the following differences between inorganic matter, physical force, chemical action and crystallization on one side of the chasm, and vital force and vegetable organisms on the other. Vital force takes lifeless mineral ingredients and transforms them into living matter. Crystals, the highest inorganic products, are mere statical aggregates. Living organisms, vegetables, are dynamical products. Crystals can be decomposed and reunited any number of times. Decompose the vegetable organism; and it is destroyed for ever. Crystals emit heat in formation. Vegetable organisms absorb heat. Inorganic molecules have immobility. Vegetables have motion in a certain sense.

Inorganic bodies are built up from without by accretion. Vegetable substances from within by assimilation. Inorganic bodies have not the power of reproduction or self-multiplication. Vegetable bodies have. Chemical action is destructive of vital force and vegetable organisms, when it conquers vital force. It tears down and destroys the organism when dominant. Vital force constructs and builds up only by conquering and subordinating chemical action to its uses. These two forces are antagonistic. It is not a difference of degree, or of modification, but of nature. They can not be correlated. There is a chasm here that can not be bridged over. Scientists admit that they do not know what force is, nor what life is especially. How can they declare that they can be correlated? Evolution is dumb before this chasm. Huxley, when writing for the *Encyclopædia Britannica*, as a scientific author for a work that would stand for ages, makes these statements: I. When the earth was in the early formative, condition revealed by science, life could not have been on it or in its elements. II. There is a chasm between the not living and the living, that must be bridged over, or evolution is impossible. III. We have no knowledge that it is bridged over or ever has been. IV. It is contrary to all experience, knowledge, and analogies of nature to suppose it ever has been bridged. V. Then spontaneous generation of life must have occurred, or evolution is utterly impossible. VI. We have no experience or knowledge of any kind that spontaneous generation ever did occur. VII. It is against all experience and knowledge and analogies of nature to suppose that spontaneous generation ever did occur. VIII. At present we are inexorably shut up to the conclusion that a supernatural act introduced life, that co-ordinates matter in the bioplast, the initial point and origin of all living organisms. In his demonstration, speaking as a special pleader for evolution, he ignores these statements he made as an author in science, and assumes the very opposite. We will accept Huxley, the author of science, and reject Huxley when pettifogging as a special pleader for a hobby. Darwin, by commencing his theory with life inbreathed into primordial germs by a Creator, practically confesses that there is this chasm between the not living and the living, and that he can not bridge it. He can not assume life and germs as a starting point without basing them on the immovable rock of creation by intelligence. After he has used an intelligent Creator to launch his ship he tries to discard it, but he can not. He needs it as a propelling power, a moving energy every moment, and to push it off of shoals a score of times afterwards. Evolutionists like Darwin use the idea of a Creator as the clown claimed he used the ladder when he boasted that he could set it up in open air, climb to the top of it, and draw it up after him! They use the idea of a Creator to climb up on to a clear starting point, and then undertake to draw it up after them, and to deny using it, and ridicule all idea of its ever being used. They can not use the ladder and then cheat us out of what they did, by calling it an Unknown Power, as does Huxley. It is stealing the ladder of creation, and trying to deceive its owners by calling it by a false name. The products of the power in which they try to hide prove it to be intelligence. Sometimes evolutionists try to deny that there is this chasm, or to bridge it by such nondescript substances as protaplasm or bathybius. Huxley once claimed that there was on the deep-sea bed a substance that was the link between inorganic and organic matter. He called it bathybius. Others called the nondescript particles monera. Haeckel builds his evolution of life on it. So does Strauss. Late deep-sea dredgings prove that it is clearly inorganic, and is no such substance as has been claimed. In a late number of the *American Journal of Applied Science*, and but a short time before this lecture, Huxley admitted that the existence of any such substance as he once claimed and called bathybius had been disproved. In this lecture he assumes it as a reality, and as the link between inorganic and organic matter. As a special pleader for a hobby, he assumes what he confessed as a scientist had no existence, and built his theory on it. The theory of creation accepts the teachings of science, that life was created by intelligence and builds up the vegetable cell, germ, or seed, for it always taught that such was the case.

XIII. Animal life, with locomotion, sensation, power of voluntary action, instinct and understanding, whence came it? XIV. The animal cell, or germ, or organism, whence came it? Evolutionists seem to be in a dilemma here, from which they can see no escape. Some times they call our attention to existences that they claim are links between animals and vegetables, and they seem ready to claim that animal life is evolved out of vegetable, or to confound the two at a certain connecting point. Then, again, our attention is called to such substance as bathybius that is claimed to be a connecting link between animal and inorganic matter. In both cases insuperable objections beset them. Microscopy has placed an impassable chasm between animal and vegetable life and organisms. They differ in cellular structure. What will nourish vegetable life and cell, will destroy animal life and cell. What will nourish animal life and cell, will destroy vegetable life and cell. The difference is one of nature, and is a vital one, and can not be bridged over. Vegetables have not sensation; have not voluntary motion as animals have. Then there lie between vegetable and animal life these irreconcilable differences. Between inorganic matter and physical force, and animal life and organisms, there lie all the difference there is between vegetable life and organisms, and inorganic matter and physical force; and in addition to that, all the difference there is between vegetable and animal life and organisms. As it is often assumed that there is no difference between inorganic and organic matter, at what is assumed as the connecting point, or between life and physical force, we will state other facts. The name now given to the most minute and lowest displays of life and its organism, the initial point and minutest unit of life is bioplasm. It consists of pabulum or nutrient matter, germinal matter, or matter in which formative life is active and present, and this life and germinal matter are called the cell, and the life the bioplast; and also formed matter, or matter that has been used by the bioplast and rejected. The center of the cell may be called the bioplast. It takes inorganic or formed matter, and changes it from not living to living matter, then rejects it as life passes out of it, and changes it into formed matter. Bioplasts always come from bioplasts. They have the power of self-subdivision and self-movement. In self-subdivision each bioplast becomes a new bioplast. When these bioplasts are dead they can not be resurrected. Chemistry can not produce the work of the bioplast nor explain it. It is antagonistic to it and destroys it, unless the life in the bioplast conquers and subordinates it. Bioplast comes from bioplast alone. This teaching, the latest and best established result of scientific research, shows that structure is the result of life-power, and difference of structure the product of difference in life-power. Huxley and all evolutionists claim that structure modifies force and produces life, or life is the product of structure, and that difference of structure produces difference in life. In this, evolution positively contradicts the fundamental principle of physiology, and as this is a fundamental idea, the basis idea of evolution, it is utterly false—must of necessity be so. Let any one carefully follow this thought, and it overturns all idea of evolution from mere matter and force. Then life was created and implanted in the matter of the bioplast, that thus became living matter, by the Creator, and not by chemical action or physical force.

XV. Then whence came instinct, that often works out such wonderful results of reason? Also, understanding and volition to a certain extent in animals? Evolution can not answer, except to assume that it is physical force modified by the animal organism. This, reason utterly refuses to believe. Creation says it was implanted by intelligence. XVI. Whence came the co-ordination of the vegetable organism and life with each other, and the co-ordination of the animal organism and life with each other, and all four of these with each other, and to all the rest of nature, and nature with each and all of them? Evolution can only say it was evolved out of what did not contain it. In it are realized the most exalted ideas of reason, and creation says they were realized by reason. XVII. Then whence came the orders, groups, families, species and varieties of animals and vegetables? This is all evolution can make any show of accounting for, and here it utterly fails. Its theory of difference of life being caused by difference of structure, is contradicted by science, which teaches that difference of structure is occasioned by difference of life. All bioplasm of animals is precisely alike at first. But as the life begins to act in evolution, differences begin to appear between the four great orders of animals, in the first appearances of their germs. Then difference of species appear, then of varieties, thus proving that the real difference is in the life, and not in the structure; nor is it caused by the structure. Each bioplast, under the action of this life, builds up the animal from whence it was derived. There is co-ordination, prevision and provision back of the commencement of such process, which had their origin in intelligence. This radical difference in the starting of development, and in the life back of it, forbids all idea of evolution. Evolution fails to account for this difference in life, the real difference, and for the co-ordination, prevision, law, and plan. Creation says all this had its origin in intelligence.

XVIII. Whence came man's wonderful bodily organism, so wonderful and so different in essential particulars from those of animals; and his brain so much larger, and his specific characteristics so wonderful and so much above animals? An eminent physiologist enumerates four hundred of these specific differences. Here evolution utterly fails. There is a chasm between man and the most man-like ape no evolution can bridge. There are not almost innumerable intermediate links, such as evolution, by slight differences, requires. There are absolutely no traces of any such. The oldest fossil remains of man prove him to be just what he is now. When we recollect the millions of remains of animals easily destroyed, that have been preserved through geologic catastrophes, and that man is the latest and last of the varieties of animal life, and that he has not been subject to any such violent catastrophes; and when we remember how easily and how certainly his powerful skeleton with its large bones must have been preserved, and find no traces of these intermediate links with equally powerful skeletons, and reflect what millions there must have been on the earth, we can only conclude that there are no such remains because there are no such links.

XIX. Man's rational, moral and religious nature, and its catholic ideas and results, whence came they? Here evolution stands dumb. Wallace and Huxley admit they can not explain this. If it be claimed that life can be correlated with physical force, and is physical force modified by the organization in which it is manifested, we appeal to these facts. Tyndall, Bastian and Spencer admit it can not be done. Then we ask, if physical force be correlated with life and thought, which are but physical force, what knows the correlation? Does physical force know the correlation of itself with itself? Life-force or power has consciousness, spontaneity, rationality, knowledge and volition. Physical force has not a suggestion of either. Life-power controls all forces. It is conscious that it is different from force. It is responsible, and possesses moral character, and so do its acts. All this is lacking in physical force. In the displays of life-power the same act differs in character on account of motive. This is not true of force. Spirit, by intuition, knows and judges the character of its own acts. We give no character to an act of spirit until we pass back to the motive that prompted it. Mind and force are separated by the characteristic of consciousness, and by every act of mind in consciousness. Life is not force, but an intelligent, conscious moral power. Life is independent of force in its origin. Never evolved by force or out of it. Force is mechanical. Life is a living power. Then all talk of correlating life, especially rational life, with force, is as gross a contradiction of all true science and sense as can be conceived.

XX. Then the immeasurable difference there is between man and animals in mind, or the displays of life-force, if we use the phraseology of the evolutionist. Let us array these carefully before us, that we may clearly apprehend what evolution has to bridge over, to trace man's origin back to animals. 1st. Man has a conscience. Animals have none. 2d. Man has a moral nature. Animals have none in any sense. 3d. Man has a religious nature. Animals have none. 4th. Man has elaborate and exalted systems of religion and religious ideas. Animals have none. 5th. Man has the idea of future life and wonderful anticipations and speculations concerning it. Animals have none. 6th. Man has responsibility and accountability, and a sense of responsibility and accountability to a higher power, and of reward and punishment. Animals have none. 7th. Man has remorse for evil acts, and approval of conscience for those that he calls good. Animals make no such distinctions in acts, and have neither remorse nor approval. 8th. Man divides acts into voluntary and involuntary, and the former into right and wrong. He always inquires into the nature of acts and things, and divides them into the categories of good and evil, true or false. Animals have not a particle of this in thought or act. 9th. Man always inquires into the cause or source of things, and their nature. Animals never do. They have no faculty impelling them to do so. 10th. Man reasons on his reasonings. Animals never do. 11th. Man has ideas of universal, rational principles, universal truths, in mathematics, logic, ethics, science and art. Animals never have. 12th. Man reasons on his reasonings by means of these universal truths and build up vast systems of reasoning. Animals never do. 13th. Animals, as individuals, do not accumulate a vast system of experience and thought. Man, as an individual, always does. 14th. Man, as a race, has accumulated the experience of generations in science, art, knowledge and all departments of life and thought. Animals never have. 15th. Men have built up vast systems of religion; always have. Animals never have. 16th. Men have built up vast systems of ethics, art, science and government. Animals never have. 17th. Man acts rationally and morally, from rational and moral nature and motive. Animals necessarily and instinctively. 18th. Man has free volition, a will in liberty. Animals have not. 19th. Man has to experiment, learn, discover; and he makes mistakes. Animals make no mistakes. 20th. Man makes sublime discoveries and grand inventions. Animals make none. 21st. Man, as an individual, progresses, improves. Animals do not. 22d. Man, as a race, improves, progresses, and is susceptible of endless progress. Animals are as they were at first, and are not susceptible of progress. 23d. Man invents and uses implements and machines; has to do so to accomplish his purposes. Animals use no implements; need none to accomplish their ends. 24th. Man, as an individual, spontaneously progresses. Animals do not. 25th. Man, as a race, spontaneously progresses. Animals do not. 26th. Man retrogresses rationally and morally, and in life, unless he accepts the true and good and practices them. Animals are liable to no such retrogression. 27th. The above facts concerning man prove that he is on probation. Animals are not. 28th. Man is a source of development and progress to others and those beneath him. Animals are not. 29th. Man has the noble element of rational love, and the domestic feelings, and the family. Animals have not. 30th. Man has aspirations for the good, true and beautiful, and for progress and advancement. Animals have none. 31st. Man's highest and true good is in self-denial and self-sacrifice for others. Animals are selfish, and self-preservation and gratification their supreme law and end. 32d. Man has produced the wise, the good, the learned, the great, the patriot, the philanthropist, the martyr. All this is foreign to and in direct opposition to brute nature. 33d. Man's real end is achieved by conquering nature, and rendering it subject to himself, and in conquest of self and his own nature. The end of the brute is accomplished in servile obedience to nature at large and its own nature.

Man has all these characteristics, and they are continually expanding in activity and power. There is not a trace of them in the brute. The most persistent effort of man's intelligence can not make the animal nature take on one of these characteristics or show a semblance of them. The animal can not be touched by them. Then, to talk of unintelligent physical conditions developing out of the animal what the highest efforts of man's reason can not touch or excite a trace of, is absurd. Evolution, however, asserts that all these noble qualities of man's rational, moral and religious nature have been evolved by the operations of blind, irrational nature, on the nature of the brute. The theory of creation says that Infinite Wisdom created man a Spirit, like himself in nature, and made him in the mental and moral likeness of the Infinite Creator. XXI. Lastly, and to this we call special attention, as the question of all questions in the problem. The co-ordination, arrangement, adjustment, adaptation, order, method, system, law, plan, design, purpose, prevision, provision, alternativity and choice, the realization of these most exalted and abstract ideas of reason, and those of mathematics—beauty, harmony and utility—that are realized in each of the twenty elements of the problem mentioned, whence came they? Evolution says, out of blind, irrational matter and force, or out of an Unknown Power. Reason says that it is an insult to reason to suggest that they were evolved by force and matter. It declares that the Power producing them is Reason, and must be known to be Reason. It declares that Reason realized these ideas and constructed the Universe in accordance with them in such realization.

Such are the elements of the problem. Evolution utterly fails to account for them. They pronounce evolution an absurdity. Creation by reason, in accordance with the highest law of reason, alone can solve either of these elements of the problem, or the entire problem. They demonstrate creation by reason, and point to reason as the source of all existence and phenomena, as clearly as thought has its origin in mind. Then we suggest that the apostles of evolution — I. State the problem fully and fairly, especially these disputed elements. II. That they state fairly and fully the conflicting theory, in its full strength. III. That they show by a fair application of the conflicting theory to each of these twenty elements of the problem that it fails to solve them. IV. That they establish the data on which they base evolution. Then show that the theory is a logical deduction from them, being careful not to expand it beyond what is warranted by the data; and, above all, that they beware of stretching the theory in application, and applying it to things with which it has no connection. Huxley failed, utterly failed, in every particular of such work. His demonstration was as total a failure as ever was made in human effort. Let each believer of the theory of creation by intelligence notice particularly what the evolutionist must do to solve the problem he has undertaken, as we have explained it above, and try all his speculations by such a test, and they will vanish like mists before the morning sun.

Review of Carpenter's Fallacies of Testimony.

The positions taken by the skeptic in regard to the New Testament have been various and almost infinite in variety. It has been asserted that we have no evidence that such a person as Jesus, or such persons as his apostles, ever lived, and no evidence that any of the events of the New Testament history ever occurred. These books were fabricated hundreds of years after the age in which these events are declared to have transpired. Or that the history is a fabrication of men of later ages, based on traditions and exaggerated legends of what Jesus and his apostles said and did. Or that it is an exaggeration and expansion in later ages of brief simple writings of the apostolic age. Or that the history is an exaggeration of the life and sayings of Jesus, made by his enthusiastic fanatical apostles some years after his death. Or they are intentional exaggerations and fictions, woven around the real history of Jesus by his apostles. Or they are records of a mythical story that grew up around the career of Jesus in the course of perhaps a hundred years after his death. The searching criticism to which the books of the New Testament have been subjected has developed so much testimony to their authenticity and genuineness, and their truthfulness, that the skeptic has found he must either reject all the history of the world that is older than A. D. 1000, or accept the New Testament on the same grounds as he does all other literature older than that date. Hence all candid and well-informed skeptics accept the New Testament as substantially authentic, genuine and truthful. This they are compelled to do on account of the unaffected air of candor, truthfulness and life-like narration that characterizes the history, the definiteness and particularness of detail—the undesigned and natural coincidences perfectly harmonizing with the customs, literature, persons, places and contemporaneous history of the apostolic age.

Then there is contemporaneous history, and that of the succeeding generation. Then the candid skeptic has either to reject all literature as old as these books, or accept them. In the March No. of the *Popular Science Monthly*, is a very shrewdly written article by Dr. Carpenter, that states the position of such persons at the present time. They are willing to accept the ordinary and the natural in these writings, but the miraculous and supernatural they reject. But we can not do this, if we would. The supernatural in the New Testament, is not a foreign element foisted into the natural, that should cast out, nor a minor element that can be rejected and do no violence, or little violence to the natural. It it the basic idea of the entire book, in its history, doctrine, law, and rule of life. It is on it that the New Testament bases its claim to be accepted by men. Reject the supernatural, and the rest will crumble away in our grasp as surely as will the corpse after the spirit has been driven out by violence. Then such an attempt impeaches the honesty of Jesus and his apostles. People believed Christ and his apostles wrought miracles. They never undeceived them but claimed that they did. They based their claims to be accepted as teachers, the claims of their doctrine, and the authority of this doctrine and themselves on this claim. Christ could not have had the influence over the people to lead them to believe that he wrought such miracles as he claimed to work, unless he really performed them. The actual performance of the miracles is the only rational cause of the belief. People, especially hostile, skeptical people, could not have been deceived in regard to his miracles. They could have undeceived themselves. His enemies would have exposed him. Then Jesus himself is the greatest of all miracles. His character, life, and teachings, are *the* miracle to be explained. They were utterly unselfish and purely benevolent, perfect in love and self-sacrifice. He was free from all prejudice, and was as broad as humanity in all things. He was entirely unambitious in all directions. He was self-sufficient in teachings and life. His teachings were universal truths, universal and eternally applicable principles, susceptible of universal and eternal application. His life and teachings were perfect and complete, and without the blemishes of all other teachers. His lack of learning and acquaintance with the world, render this the miracle of the New Testament. It renders miracles perfectly consonant with his character. Enthusiasm or fanaticism never produced such a character. And he was absolutely free from either. Love of consistency did not impel him to allow the people to attach miracles to his acts. For he was perfectly honest and truthful, and no flaw can be found in his life and teachings. Then when such a character allows miracles to be attributed to him, and claims to work them, and bases his claims on them, he certainly wrought them.

We can not account for the acceptance of the teachings of Jesus and his apostles except on this ground. Men accepted their teaching, before whom and among whom these miracles were claimed to be wrought. They changed their lives and conduct in accepting it. They had no earthly motive for doing so All such motives were against their doing so. They endured persecution and death for what they must have known to be false, unless it was true. Gibbon's four reasons for the acceptance of the religion of Jesus by such persons, concede nearly the whole ground. The extraordinary zeal of which he speaks could not have existed, unless these persons knew that what they claimed to have seen really transpired. Their doctrine of future life was based on one of these miracles they claimed they witnessed. It would have had no influence on them unless they knew that the miracle really transpired and demonstrated its reality. Their pure and austere morality, which he concedes, forbids their being deceivers, and they were unless they witnessed these events. The growth of the Christian republic was impossible unless the builders and the ones they converted, knew the facts on which it rested to be real, and they must have known it if they were false. Then we can not reject the supernatural without destroying the character of Jesus and his apostles, and utterly destroying the history and doctrine of the New Testament, and rendering utterly incredible the early history of the church and early Christians, which skeptics themselves admit to be true.

We have, so far, based what we have said on the concession of the skeptic, that the New Testament is authentic, genuine, and truthful, at least substantially so. Carpenter seems to concede this, for he says the argument now is, "Granting that the narrators wrote what they saw, or believed they saw," etc. The argument would not assume that form unless the narrations be authentic and genuine. Such a concession would not be made by him unless it were true. He concedes, then, the authenticity and genuineness of these writings. He does not state, however, the issue. He does not state it correctly. He says, "Granting that the writers narrate what they saw, or believed they had seen, or had heard from witnesses that they had reason to regard as trustworthy as themselves, is their belief a sufficient basis for our belief?" Now I protest that this is not the issue at all. The narrators do not present their belief as a basis for our belief. They say "We have not followed cunningly devised fables, but were eye-witnesses of what we tell you." "We saw with our eyes, heard with our ears, and handled with our hands, what we tell you." The issue is this: Granting that we have their testimony, is their testimony a sufficient basis for our belief? Must not we accept their testimony on the same grounds that we accept any other, and all other testimony? Must not we reject any and all other testimony, on the same grounds we reject this? Although Carpenter seems to concede that we have their testimony, yet we will briefly recapitulate why we believe we have their testimony, as they delivered it. Why we believe that the apostles and companions of Jesus and his apostles wrote the testimony we have now, or why we accept these books as authentic and genuine.

These facts will be conceded by all intelligent, candid skeptics: There was such a person as Jesus of Nazareth, who lived during the reigns of Augustus and Tiberius, and suffered death under Tiberius. There were such men as James, John, Peter, Matthew, etc., who were his companions and followers, who preached what they said Jesus did and taught, and made disciples of Jesus of thousands of Jews and Gentiles, and founded churches, and suffered martyrdom and death for so doing. There was such a person as Saul or Paul of Tarsus, who preached, as he claimed, the teachings of Jesus, and made many converts, and established many churches, and suffered death under Nero. There were in the Roman Empire, in Nero's reign, scores, and doubtless hundreds of congregations of disciples of Jesus, made by these persons, embracing many thousands of persons. They were in Asia, Africa, Greece and Italy, and their islands, and in nearly all the cities of these countries. Tacitus so declares, and that Nero persecuted them. From Nero's day to that of Trajan, they suffered several severe persecutions. At that time, A. D. 100, according to Pliny's official report to the Roman Emperor, they had thousands of churches, and hundreds of thousands of members. In A. D. 150 they had increased to millions, and had controversies with Pagans and heretics and infidels, and with each other, and made appeals to the Roman government against the persecutions they endured. From A. D. 150 they were regarded with apprehension by the Roman government. In A. D. 250 they had increased to many millions, and had thousands of churches all over the empire, and were regarded with alarm by the government.

The contemporaries of Jesus told their stories of his teachings and his acts. There were traditions extant in the apostle's day, from the death of Jesus to A. D. 100. These were the testimony of living eye-witnesses or versions of them, and the witnesses were living during this period. Paul wrote many letters concerning the doctrine and acts of Jesus, of which authentic and genuine copies are extant. There were writings professing to be writen by the apostles, or to record what they said in A. D. 100. They were concerning the acts and teaching of Jesus. There were extant from A. D. 100 to A. D. 350, the epistles of Paul, and writings professing to be written by the companions of Jesus, or what they said Jesus taught or did. These writings were read, studied, used as a rule of faith and practice by these Christians. They were preached, commented upon, and written about until a vast literature grew upon them. They were used in controversies with each other, with infidels, with Pagans, and in public appeals to government, by these Christians. From A. D. 100 to 350 large numbers of learned men abandoned Judaism, Paganism and philosophy for these books. They preached them, taught them, wrote on them, suffered persecution and martyrdom for them. None will deny these statements.

Then these queries arise: Did these Christians have the same books from A. D. 100 to A. D. 350? Did they have the same books in all places? Were their books changed or corrupted during this period? Have we the books they had? Had they other books that we have not? Have the books we have been corrupted since their day? Or are they authentic and genuine? We can trace the books we have now back to A. D. 350. We have three old copies from different and independent sources, reaching back to that period, that are as we have them now. This is conceded. Perhaps we may as well glance at the apocryphal books of the New Testament, of which the infidels talk so much. We agree that there are apocryphal writings extant, and that there were others lost. But we deny that, with perhaps one or two exceptions, these can be traced back to A. D. 200. We deny that even in their day, which was usually long after this period, that they were accepted by any considerable portion of Christians as authentic and genuine. We deny that they were ever excepted as sacred, or inspired, or canonical like our present books, by any considerable portion of Christians. They were in no sense rivals of our present books. We read of no great controversies over these or any such books, as there would have been had there been such books, from A. D. 100 to 200. There were no forgeries of books during this period, for we read of no controversies, such as such acts must have occasioned. Our present books were not written from A. D. 100 to 200, or we would have, in the literature of the church, records of the controversies such acts would have occasioned.

The writings quoted and appealed to, then, were accepted without question, and without rivals. No mention is made of rivals. Some of the quotations that infidels clamor over were of oral tradition. Some of these were written by such men as Papias. Some were quoted by writers on a few occasions. No one ever regarded them as canonical, like the other books. The writers from A. D. 100 to A. D. 250 were men of pure morality, lofty and severe virtue. They opposed all deceit. They condemned all attempts at deceit. They would not have been guilty of it in their writings. They had no motive for it. They died for their love of the truth. They preached and practiced reverence for their sacred books, and scrupulous care in keeping them pure. They were learned and intelligent men, and some of them men of eminent learning and ability. They had no motive for such corruption. It would have exposed them to defeat by their enemies. Their enemies never accused them of such an act. Their writings and their books they have handed to us as canonical escaped such corruption. Will the infidel prove that the apocryphal books he prates so much about were written before A. D. 200? That they were ever accepted as authentic and genuine by any portion of Christians? That even when they were accepted as authentic and genuine, that they were regarded as inspired and canonical? That any books but those we have now were regarded as such? That there ever were any rivals to these books? Will he tell us *how many* times apocryphal books are quoted by writers before

A. D. 200? How many times they are quoted as canonical? Will he tell us what evidence he has that there was any dispute on this question? Will he tell us, if he refers to sentiments entertained by certain writers, that it was right to deceive in religious matters, if any Christian writer before A. D. 200 entertained such an idea? Will he show that any considerable body of Christians before the year 200 did so? Will he show that any of our present books were corrupted by such persons before A. D. 250? Or at any time? Let us have proof, and not insinuations.

We reject these apocryphal books for these reasons, and refuse for the same reasons to have them used as rivals of the canonical books. They are extravagant, foolish and puerile, like all fabulous legends. They are just like the age in which we first find them—the fourth and fifth centuries—when superstition and such conceits abounded. They contain traces of the heresies and controversies of that age. Their style is entirely different from that of the canonical books. Their arguments and ideas are foolish, extravagant conceits, like the works of that age (400 to 500). They attempt, just as mere human curiosity would, to patch up the history of Jesus by telling of his childhood. There is a chasm as wide as between the romances of Lippard and Bancroft's history, between them and the plain, simple, grand history of the New Testament. They are not quoted or referred to by the writers of the second and third centuries more than four or five times at the most, and there is dispute whether these quotations refer to apocryphal books. There is dishonesty in the way the infidel uses these books, and the claims he makes for them. He exaggerates, misrepresents, and actually manufactures many of his so-called facts.

We will now present our reasons for believing that the New Testament books are authentic and genuine. 1. We have, in the Peshito-Syriac translation, a translation as nearly like our present books as a translation can be like the original, and made, all critics of note admit, early in the second century, and very probably in the latter part of the first, or, in other words, certainly not more than twenty years after John, and probably during his life. 2. We have, in the old Italic, Ethiopic and Coptic translations, translations bearing the same similarity, made during the second century, or within one hundred years of John, and probably during the life of some who were cotemporary with him. 3. We have, in the Canon Muratori, a catalogue of the books of the New Testament, with the exception of two torn off at the beginning, and one or two minor omissions, just as we have them now. All critics of note place this in the second century, and about A. D. 170, or within seventy years of John. 4. We have extant writings of Barnabas and Clement of Rome, cotemporaries of the apostles, Justyn and Ignatius, who were cotemporary with John in early life, Iranæus, Origen, Tertullian and Clement of Alexandria, who were of the next generation. Barnabas and Clement quote from some of the present gospels. Justyn says they were read in the churches. He does this in A. D. 140, or fifty years after John, in a public memorial to the Roman government. Ignatius makes thousands of quotations; Iranæus over seven thousand. Tertullian quotes from every chapter of Matthew, Mark and Luke, and nearly every chapter of John, and from the rest of the New Testament in proportion. Our present New Testament can be largely reproduced from his writings. Origen and Clement of Alexandria quote so much that our present New Testament, with the exception of a small portion, can be reproduced from their writings. 5. These writings were quoted in controversies, public controversies between Christians, between Christians and heretics, infidels and pagans. Quotations from our present books were made in thousandsof cases, and they were quoted and referred to as existing books, known, read and used by Christians as sacred books, and a rule of faith. 6. They were quoted by Justin, Origen and others, in the same way in public documents addressed to the government. 7. In their writings these defenders of Christianity have left their replies to those who assailed it. In them they quote statements of heretics, infidels and pagans of the existence of such books and of their contents, that prove they were our present books. As these were quotations in public controversy they must have been substantially correct. 8. Tacitus, Pliny, Lucian, and other pagan writers, have left testimony that such people existed, that they had such books, and other testimony corroborating the main features of these books. 9. These books were read, studied, used as a rule of life, and regarded as sacred, commented on and discussed and written about, until a vast literature grew upon them. They sustained a relation to the life of millions of people that was peculiar and sacred. 10. These writers abandoned paganism and philosophy for those books and Christianity. They laid down their lives for their belief. They endured loss of all things. They were of lofty and severe morality, says Gibbon. They condemned all fraud and deceit. They regarded these books as sacred. They enjoined as a most sacred duty keeping them pure. They condemned, unqualifiedly, all idea of corrupting them. They were men of learning and ability. Some were men of eminent learning and ability. They must have known whether these books were authentic and genuine or not. They died for their belief of their authenticity and genuineness. They were neither hypocrites nor deceivers, for they had no motive for such conduct. All motive of that kind was in the opposite direction. They were not ignorant or fools. They knew what they affirmed, and for which they laid down their lives. This gives these books a series of evidences no other books have, and the highest kind of evidence.

11. This religion was founded, the events on which it was based, claimed to have transpired in a most public manner, in a learned, skeptical, hostile age. These books were accepted by learned men in a learned, skeptical, hostile age—by men who must have known that they were not what they claimed, if they were not, and men sacrificed all advantages for them, gained no earthly advantage, and suffered death and persecution for them, under such circumstances, and these men were neither fools nor fanatics, and could not have been knaves, hypocrites or deceivers. 12. *Their books* are our present books, for Lord Hails, Sir George

Dalrymple, reproduced all of our present New Testament, except eleven paragraphs, from the writings of these men, writers from the apostles' day to A. D. 250. 13. The undesigned coincidences and incidental allusions to customs, events, persons, places, etc., are in exact accordance with the age of the apostles. 14. There are no traces of the events, places, customs, persons, etc., of the later age to which infidelity ascribes them. No forger could have secured the exact coincidence on the one hand, and avoid such coincidences on the other. 15. There are no traces of the controversies and heresis of the later ages to which infidelity assigns them, as there are in the apocryphal books written in that age. They were not written in that age, or the writers would have placed in such books support to their opinions, as they did in apocryphal books. They were written before such age, or in the age of the apostles. 16. These books are written in Hellenistic dialect, Greek written by a Hebrew. At first the Hebrews controlled the churches. They did in the apostles' day. Later, the Greeks controlled the churches. The Greeks had fierce disputes with the Hebrews in that later age. They despised the Hebrews. They would not have received forgeries from the Hebrews. These books must have been written by Hebrews. They were written among and by Hebrews, and received by both Hebrew and Greek, during the first century, during the dominance of the Hebrew.

17. Renan and other intelligent, candid skeptics accept the authenticity, genuineness and truthfulness of most of the Pauline epistles, and of portions of other books. This they do because they must accept these books, if they do others as old. If they reject these books, they must all others as old. But if they accept this much, the connection is so vital and inseparable with the rest that all must be accepted. No such separation can be logically or reasonably made. 18. There is all the evidence, all kinds of evidence, for these books, that there is for any other books as old. There is other and far higher and stronger evidence for these books, that there is not for other books. There is one hundred fold as much evidence for the authenticity, genuineness and truthfulness of this small volume, the New Testament, as there is for all the profane literature, for all the literature of the world as old. There is a thousand fold more evidence for this book, than there is for any book as old, that the infidel accepts unquestioned. There is not a book in the New Testament that has not more evidence than any book as old, that the infidel accepts. Most of the books of the New Testament have, each of them separately, more evidence than all extant literature accepted by the infidel. 19. Subject the literature of the world, aside from Christian literature, that claims to be older than A. D. 1000, to one hundredth part of the severity to which infidelity subjects Christian literature, and there would not be a vestige of it left. Subject all literature to the same severity, and we would not have a book one hundred years old left, and a large portion of subsequent literature, even of living authors, would be rejected. We have two thousand MSS. of the New Testament.

Several copies are older than A. D. 1000. Of most books accepted by infidels, as old, we have but a few, in most cases but ten or twelve, and very rarely over a score. Not one of these is older than A. D. 1000. But few older than A. D. 1400. We have more MSS. of this one book than of all literature of the world that is as old. We have several copies of the New Testament older than any book accepted by the infidel. They are older, by six hundred years, than any book he accepts, and a thousand years older than some he accepts. Such are the facts. For these reasons I accept the New Testament as authentic and genuine. For these reasons I believe I have the testimony of Matthew, Mark, Luke, John, Paul, Peter, James and Jude; or the testimony of eye-witnesses, and the record of the testimony of eye-witnesses.

But it may be asked, Why do you believe their testimony? Is their testimony a sufficient foundation for your belief? It is for these reasons. Every canon of evidence sustains their testimony, as Greenleaf shows. These events were such as are clearly susceptible of proof. They were open, public, and could have been exposed if there had been fraud. They were in the presence of shrewd, scrutinizing enemies. There could be no fraud or trickery. There could be no mistake or delusion. They were of such a nature that mistake or delusion was impossible. The testimony is that of eye-witnesses. The witnesses were, in intelligence and character, competent. They were not deceivers. Were not deceived. They were not deceived into extravagance and fanaticism and myths. Their morality in life and teachings is above question. Their teachings and lives forbid the idea of deception. Their suffering, persecution and martyrdom proves this. A man may, through self-interest, suffer persecution for testimony, but never death, for he has no interest in such a case. Self-interest is all in the opposite direction. A fanatic may die for a dogma, but never for a fact or for his own testimony, when it is false. A false witness never suffered martyrdom for his lie. His character and all self-interest forbids it. The witnesses testified to the facts in the same country, and among persons who must have known that the events did not transpire, if such were the case, and began such testimony right after the events. Thousands of these people accepted it, and forsook all for such testimony, and suffered persecution and death for what they must have known to be false, if such were not the case. There was no reason for this, and every reason that could induce fraud was directly against it. Then these preachers claimed to work similar works all over the Roman empire, in the same open and public manner. On such a claim they converted thousands of eye-witnesses, of learned and skeptical, in that learned and skeptical age, who, in opposition to all interests, accepted persecution and martyrdom, in believing their claim to perform such works openly in their presence.

Let me here emphasize a thought that is vital to this entire discussion. The narratives of the New Testament have every feature of a truthful history by eye-witnesses. The account is direct, natural, life-like, and is so, not on account of the art of the *writer, which* is apparent in every page, as is the case with a novel, but because the writer writes what he saw as it transpired. There is no attempt to excite wonder, or to astonish, or amaze, or glorify the actor, but to tell the plain story. We are never told of the personal appearance of Jesus, or of his attitudes and gestures and manner, like the novelist, but just the unvarnished tale of what he said and did. The story is as plain and life-like as the tale of a child. No more perfect models of unadorned narrations of facts ever were written. As you read you feel that the writer saw just what he wrote. Histories of wonders and apocryphal works differ in all respects from this. Extravagance, exaggeration, desire to tell something wonderful, and to make the story as wonderful as possible, appears in every sentence. The narratives of the New Testament differ from stories of wonders as history does from the marvels of a haunted house or ghost stories. This utter lack of all characteristics of such narratives, this very perfection of historic narration, is the highest of evidence that they are unvarnished, unadorned, unexaggerated statements of facts as the narrators saw them, and that they saw them just as they were, without extravagance or delusion.

Monumental institutions, baptism, the supper, the Lord's Day the name Christian, were established in commemoration of these events. Were established at the time, in the place, and among the persons where these events were said to have taken place. Were in commemoration of events that these persons could not have helped knowing to be false, unless they actually transpired. Thousands of these accepted these institutions and died for these lies, unless they were realities, when they must have known they were lies, if they were not realities. Out of all this grew a grand system of religion, that has done more for the world than all else combined. It has reformed the wicked, the vile, and lifted the debased and fallen. No system of truth can do more than has been done by this system of falsehood and deception, or of delusion and fanaticism, unless these facts be realities, unless this testimony be true. For these reasons do I accept the testimony of the witnesses.

"But there are miracles in the history." Well, what of it? "They are impossible." If the objector is omniscient and knows all there is in the universe, he can affirm they are impossible. If there be a God, they are possible and probable, if there is sufficient reason for such an act. It is no more impossible or improbable, than an act of creation or starting a course of evolution. "It is contrary to human experience, human experience of nature, and is therefore improbable, so improbable that it can not be established by testimony." It is assumed that the experience of certain generations is the experience of all men, and their experience of nature is all nature. Then we present the testimony of hundreds of persons of their experience of nature, or at least of their experience. Then experience is presented to disprove miracles and rejected in their proof. Again, a lack of experience in the objector is used as experience, and used to set aside experience, the very thing he claims must be the standard. There is a four-fold defect in Hume's argument. 1. Lack of universal knowledge. This alone can give the experience necessary to make the argument valid. 2. Lack of experience is used as experience. 3. Testimony is relied on to establish what the objector wants to establish, and rejected when it conflicts with it. 4. Testimony of a portion of the race as to their actual experience is set to one side on account of the objector's lack of such experience. Then in regard to a miracle we ask: Is there in the universe power sufficient to the act? There is. Was there adequate reason for the act? There was. Was the act worthy of the Power and the object for which it was done? It was. Was it calculated to accomplish the end? It was. Practically, has it done so? It has. These questions apply to the miracles of Christianity.

But Carpenter practically admits that miracles are probable, or possible rather, and under circumstances may be probable. The reader is referred to chapter vii for answers to the rationalistic arguments against miracles. There remains but one more question to be answered. If you accept the miracles of Christianity, why not accept the wonders of Paganism, Mohammedanism, Catholicism, Mormonism, and all religions and delusions, and spiritism, witchcraft, sorcery, and kindred delusions? Albert Barnes says this is the real question in regard to miracles, and he wonders that infidels have not pressed it more, and virtually confesses his inability to meet it. Carpenter can say with Othello, "On that hint I spoke." He asks why not accept these wonders as well as the miracles of Christianity? If we reject the wonders, why not reject the miracles of Christianity? We frankly reply, if they have no more evidence than the wonders, reject them. But because there are counterfeits, and many, is no argument that we should reject all coin, and that there is no genuine currency. Because the counterfeit has many of the features of the genuine, is no reason why we should reject both, for that was the attempt in counterfeiting, to give it all the features of the genuine. But unless we can detect the differences, show features in the counterfeit not in the genuine, and features in the genuine wanting in the counterfeit, we can not distinguish between them. Let us first, then, expose certain fallacies in Carpenter's exposure of fallacies, and then we will be ready to show why we reject these wonders, and do not, on the same grounds, reject the miracles. Why we accept the miracles and do not the wonders.

The first is his citing the multitude of witnesses there are for these wonders. A falsehood may have a thousand-fold more testimony than a truth, and yet Carpenter will accept the fact and reject the falsehood; and the number of witnesses is not the only thing he would consider, or even the principal thing. The character of the act, and of the witnesses, will be taken into account. A hundred men may testify that Washington was guilty of some crime or folly, and we reject it because we know from his character that it can not be true. One man may testify to his doing an act of opposite character and we accept it, because accordant with what we know to be his character. So, also, the character *of system is to* be taken into account. Again, he complains that no scientific tests were applied to the miracles. No scientists ever tested them. Scientific tests are not the tests they need. Nor are great men or scientific men the best men to test them. They were out of their field. They would be the poorest persons to test them. The case of Wallace, Owens, Hare, Crookes, Tallmage, Edmonds, and a thousand others prove this. It is not scientific men that have exposed spiritism. They have been as easily duped as any class. Shrewd, practical men of common sense have done it. If I were the Doctor, I would say as little as possible about that! Just such keen, skeptical, shrewd men did test the miracles of the New Testament. His cases of visual illusion do not apply, for not one of the miracles were of that class. Then allowing the widest margin to visual illusion, it could not affect materially such acts as these miracles. Constitution and training could not materially affect such acts as these miracles. The constitution of the keen, skeptical Jews, was in opposition to accepting the miracles. The witnesses had no mental expectancy. Mental expectancy was often in the opposite direction, and always with the Jews.

The miracles were not at all of the same character as the wonders of spiritism, and the other wonders he cites. Nor were the witnesses such persons as the mediums, in an abnormal state of mind or body, or both. Nor were the witnesses excited mental expectants, like the circles of spiritists and other witnesses he cites. The facts are not all visions and trances, and seen in vision and trance. His reference to Swedenborg does not meet the case. The events testified to were not like those testified to by Crookes, nor were they performed under such circumstances, favoring trickery or delusion. The witnesses were shrewd, sensible men, and not *scientists,* like Crookes and Hare. The apostles were not sensitives nor enthusiasts, nor were the facts they testified to at all like the facts referred to by Carpenter. They were sturdy, clear-headed, hard-headed fishermen, who displayed, in after life, most admirable coolness and common sense. Misinterpretations of sensation will not do either. The witnesses, neither apostles nor Jews nor Pagans, had prepossessions that would cause such misinterpretation. The facts could not be thus misinterpreted. His elaborate theory of ideo-motor action, or unconscious cerebration and control of muscle, will not touch a case in the miracles. Nor will his theory that the witnesses long afterwards stated what long thought had lead them to believe. They could not thus unconsciously deceive themselves concerning such facts. Nor concerning so many acts. Nor so many other persons who knew that they never transpired. There was no time for such self-deception, for the apostles preached the miracles of Jesus immediately, and among those who must have been eye-witnesses.

The Tell case and the life of Jesus are not parallel in a single feature. It had no eye-witnesses. It was hundreds of years in accumulating. Contemporaries and eye-witnesses did not die for their testimony. The world was not revolutionized in opposition to its efforts by eye-witnesses, by means of the facts in Tell's case, and millions did not die for their testimony, to what they must have known to be false, if it were not true. The case of St. Columban bears no analogy either. The acts were frivolous, absurd. Nothing depended on them, on a belief or rejection of them. Neither witnesses, nor acts, nor system, nor results bear any comparison to the New Testament. His tacit and practical dragging the miracles of the New Testament, and the character of their actors, to the level of the tricks of the Chasidim, and the character of such knaves must be rebuked as an outrage. Does Carpenter mean to say that the pure, sinless and perfect Jesus, the beloved John, the noble James, the frank and open-hearted Peter, were on a level with the knaves in the Chasidim, and that their exalted, self-sacrificing, purely benevolent, miracles were like the selfish knavery, and falsehood and trickery of such knaves? Why does he say that he fails to see any essential difference? True, he throws in the Old Testament between, as a means of letting down as easily as possible the outrage, but why quote them in the connection he does, if he does not intend to have his remark apply to the miracles of the New Testament? His attempt to account for healing by natural agency, is weak to puerility. It will not apply to but few of the miracles. It impeaches the character of Jesus and his apostles, for they claimed the healing to be a miracle.

We draw the following line of demarkation between the miracles of the New Testament and the wonders, as reasons why we accept the miracles and do not accept the wonders—why we reject the wonders and do not reject the miracles. Let us warn the objector against claiming, because he can occasionally find a miracle that has not one of the characteristics claimed for them, that he has set the argument to one side; or because occasionally a wonder is not of the character I attribute to them, he can set it to one side. We take them as classes, and especially the leading acts in each class. We claim that taking the majority and the leading acts in each class, the characters assigned to them are just: 1. The miracles were of such a character as to be clearly susceptible of proof by testimony. Wonders are not generally of that nature. 2. The witnesses to the miracles were living eyewitnesses. This is not often the case with wonders. 3. The witnesses to miracles were in circumstances to know whether they transpired or not. Such is not usually the case with wonders. 4. The circumstances of miracles were such that, if they did not transpire, witnesses must have known it. The opposite is the case with wonders. 5. The witnesses of miracles were competent in knowledge and experience to test them, know and testify. Such was not the case often with wonders. 6. All circumstances favoring deception, fraud, trickery, or illusion, or delusion, were absent in case of Bible miracles. The very opposite is true of the wonders. 7. If mistake, delusion and fraud were detected always when tests were applied the miracles should have been rejected. Such was not the case with miracles. Such has ever been the case with wonders. 8. Miracles were various and diversified. They were almost infinite in variety, and in every domain of nature. Wonders are few and in a select line chosen by the operator.

9. Miracles were in public, and in the presence of scrutinizing enemies. They asked no protection or concealment. Wonders are in secret, seek concealment and the presence of believers only. 10. In nearly all cases, conditions were such as to render mistake, fraud or delusion impossible in case of miracles. Wonders were performed in conditions favoring fraud, mistake and delusion. They seek and demand such conditions. 11. In most cases no conditions were arranged or demanded for miracles. Wonders demand careful preparation and arrangement of conditions. 12. If conditions were arranged for Bible miracles, they were such as rendered the miracle greater and more difficult, and prevented all fraud, mistake or delusion. The conditions demanded by the wonders, or under which they were performed, were just such as favored mistake, fraud and delusion, and would be demanded to produce them. 13. Miracles were unique, and were not such as can be paralleled by trickery delusion or unusual abnormal phenomena. Wonders are just such as can be paralleled by fraud, delusion and abnormal phenomena. 14. Miracles were without aid of second causes. They were immediate, instantaneous and spontaneous. Wonders were through second causes and protracted and laborious effort. 15. There were no failures in the miracles. There were frequent failures in the wonders. 16. Workers of miracles never had to resort to lying and fraud to cover failures. Workers of wonders often had to do so. 17. Workers of miracles were of the best and highest character. Workers of wonders often the reverse. 18. Reality of miracles was not questioned by the people among whom they were wrought, although often relentless enemies. Wonders were denied generally by many, and often by all but a few.

19. Miracles were characterized by mercy, goodness and benevolence, and were without fee or reward. Wonders are malicious, evil, and for fee or reward. 20. Miracles were characterized by dignity, grandeur and divinity. Wonders are silly, puerile, childish and worthless. 21. The witnesses for miracles remained an unbroken phalanx in their testimony in the face of persecution and death, and laid down their lives for their testimony. Witnesses for wonders often confessed fraud, and never submitted to such tests. 22. Miracles were not absurd and without object, but were grand in character and had a noble object. Wonders were absurd in character and without object, or had an evil one. 23. Miracles were not productive of evil. Wonders generally were. 24. Great results, such as restoring to life or healing the cripple, followed miracles, and they could be tested by them. No great results followed wonders to test them. 25. The testimony of witnesses for miracles is simple, plain, life-like and historical, and free from fables and extravagances and absurdities. Testimony for wonders is not historical in character, and is full of absurdities and extravagances. The apocryphal accounts of Jesus and of miracles are of that character, and differ from the New Testament, just as fable does from history. 26. The wit-

nesses for miracles told their story in the same place and time as the miracles transpired. Witnesses for wonders never did. 27. The account of the miracles is clear, plain history, not transient rumors. Testimony for wonders generally were rumors. 28. Miracles required belief with the whole heart. Eternal life depended on them. Changed whole life. Life of believers in that day depended on them. Nothing depends, generally, on belief of wonders.

29. Miracles were not in accordance with views of hearers and witnesses, but in opposition generally to the views and wishes of most of them. Wonders are generally in accordance with views and wishes of hearers and witnesses. 30. Miracles were wrought in advance of belief of the religion to establish it. Wonders usually follow after belief. 31. Miracles actually transpired, or the whole account is false. There is no medium ground of mistake, fraud, trickery or unusual and abnormal phenomena. They admit of no explanation by natural causes. Wonders are paralleled by mistake, fraud, trickery and abnormal or unusual phenomena. Can be accounted for on natural principles. 32. Miracles submit to and admit of all tests. A multitude of witnesses. Were permanent in effects. Had all possible tests. Wonders refuse to submit to tests. Usually but one witness, or but few, and excited believers. They are momentary in effects. 33. Miracles can not be regarded as exaggerations that can be reduced to natural events by proper criticism. Wonders are just of that character. 34. Miracles were addressed to senses. Not to passion and imagination. Were open, in public. Wonders were the very opposite. 35. Miracles were wrought by power of God, Christ, Holy Spirit and angels. Wonders by witches, goblins, demons and vile spirits. 36. Miracles were worthy of the character of their author. Wonders are in exact accord with low, vile characters. It is blasphemy to attribute them to divinity. 37. Miracles are the basis of a sublime system of history, morals and religion. Wonders are not. 38. Miracles revolutionized men's lives. Reformed the wicked and elevated the degraded. Wonders never did, but rather degraded.

39. Miracles wrought a revolution in the world's history. Apostles died for them. So did a church of glorious martyrs. The political, social, domestic, mental, moral and religious life of the enlightened world is based on them, and has been molded by them. Nothing of the kind ever followed the wonders. 40. The evidence of miracles increases with time. Their glorious results in the history of the race and the lives of men. The increase in freedom, social freedom and happiness, in domestic happiness, in mental power and purity, in moral life and purity, and in religion in nations, the great movements of the age, are all a direct testimony to the miracles of the New Testament. Such is not the case with these wonders. No system of delusion, mistake or falsehood, as Carpenter evidently regards these miracles of the New Testament, could produce such results. For *these reasons* we accept the miracles and do not accept the wonders. For these reasons we reject the wonders and do not the

miracles. We commend to Dr. Carpenter and his associates in opinion these reasons, asking a careful, thoughtful consideration of them. "If I had not done works that no other man ever did, they had been without sin. If you believe not my words, believe on account of my works"—Jesus. In conclusion, we enter an eternal protest against any such unfair system of reasoning as overlooks the above radical differences between the miracles of the New Testament and all the wonders, as this article of Carpenter.

What will you give in the place of Christianity?

We have already several times demonstrated, by an appeal to human nature, as manifested in human conduct, as revealed to us by history, geography and ethnology, that man is a religious being, a worshiping being. All systems of mental philosophy affirm that there is a religious element in man's nature. Phrenology says that it is composed of three essential elements of man's mental constitution—Veneration, spirituality and conscientiousness. It also affirms that the perfect and absolute object of the awe, reverence, worship, love, adoration and aspiration, that are the natural expression of veneration, is God, or an Infinite, Perfect and Absolute Being, the only perfect object of these emotions and feelings. It also affirms that the perfect and absolute object of spirituality is God, who is Infinite, Absolute Spirit. It also affirms that the perfect standard and authority and sanction of the "ought" of conscientiousness, "I owe the doing of this," and of "duty," or "This act is due to," is God, as Absolute Lawgiver, Ruler, Judge and Executive. All human history declares that man is a worshiping being—that he will become like the Being he worships—that he regards this Being as the supreme intelligence, knowing what is right, the supreme model of what is right. Then religion is the regnant element in man's nature, in determining his morality, his life and conduct. Man, then, must have a perfect object of worship as an object of awe, reverence, veneration, love, devotion and aspiration, as a model and as a sanction and authority for what is right. As a matter of history, religion has furnished to government and law their foundation, to morality its sanction, to revolution its aspiration, animating principle, consolation and assurance of success and reward, to poetry its exalted themes, to painting and sculpture their themes. Religion has been the regnant principle in human conduct, a dynamic power in human effort and progress, originating the idea and aspiration of progress, giving the first impulses, sustaining man in his efforts, cheering him in his struggles, and directing and controlling his efforts. The great legislators, reformers, poets, moralists of all ages, the men who have moved the world, and lifted it, have been men of religious faith, and have based their movements, laws, poems, morals and reforms and ideas on religion.

Men know and feel the action of this religious element, and its cravings for the Absolute, True, Beautiful and Good, or God. Hence, when atheism and materialism asks them to cast to one side all religion, this element in their nature, feeling that a ruthless attempt is made to strangle it, cries out in the question: "What will you give us in its stead?" There are manufacturing cities, the smoke of whose furnaces continually obscure the sun. There are persons who work, and even live in mines. Some have been born and reared there. Their nature has become so perverted and abnormal that it can not bear the light of the sun. It is oppressive. Suppose these persons were to demand of all the rest of mankind that they shut out the sun and its light, the cry of reason would be, "What will you give us in its stead?" And mankind would pay but little attention to eulogies on the benignant and glorious nature of gas, that never scorches as does the sun, or oppresses with its heat, or dazzles the eye with its brilliancy. They would care but little about the protests of such persons that they felt no need of the sun, and got along better without him than with him. They would be influenced but little by such vagaries of abnormal, perverted nature. Materialists have felt this element of their own nature struggling like the Titans under the mountains of sophistry they have piled on it. They have felt the pressure of this demand of the human soul, when presenting their spirit-murdering policy for acceptance. Comte, after spending a life in denouncing religion, and in trying to exterminate it, at last plucked out the eye of religion, drove out the spirit of the system, and, with the corpse left, constructed the "religion of humanity." His own nature was not satisfied, and he found other natures were not satisfied, unless this element were gratified. Even the cool, rational, logical Mill approved of this system, to a certain extent, but would substitute private adoration of woman as the religion. Hare the Owens and Denton run into spiritism. Ingersoll and others show tendencies the same way. All prove that they have a religious nature that they can not extirpate, and whose clamors they can not stifle. All these attempts to gratify it are like those of Comte, an emptying of the sacramental cup of religion of the wine of the real presence, Deity, and then deifying the cup.

But some attempt to meet this demand by pertness, dogmatism and ridicule, that is often real arrogance and insolence. One of the latest attempts of this kind that we have seen is a little tract from the Boston *Investigator* office, entitled, *Religion: An Infidel's Answer to the Question, "What Will You Give Us In Its Place?"* It commences—"The advocate of freethought is often asked, when he has exposed the absurdities of the Christian religion, WHAT HE PROPOSES TO GIVE IN ITS PLACE? Our reply is (and we presume it is the reply of infidels generally) that we regard Christianity as a system of superstition, and can not see that any thing is needed in its place except a knowledge of the TRUTHS OF NATURE, which Christianity contradicts, and which must necessarily replace it when belief in that system is destroyed. If Christianity is a superstition, we do not want another superstition to supersede it. When one falsehood is exposed, we do not want another falsehood to take its place. The *convalescent* is not at all alarmed at the thought that another disease is not to take the place of the one from which he is recovering. The victim of consumption, if he has been so fortunate as to obtain relief from his disease in medical skill, does not say: 'Doctor, now what do you propose to give me in the place of consumption?' He does not imagine that the old disease should be replaced by rheumatism, gout or tic-douloureux. The removal of disease is followed by health, and health is the natural condition of the human system, in which it is able to receive and assimilate the nutriment required to give vigor and strength to the body. So the rejection of the fables, fictions and false dogmas of any system of superstition, in which a man has been educated, leaves him in a healthy mental condition—a condition favorable to the acceptance and appreciation of the teachings of science, art, history and philosophy, which constitute the proper food of the human mind, and are essential to its expansion and development, as physical food is to the health of the body."

If we accept the statement of the case assumed in this extract, the answer is clear and satisfactory. But let us analyze it. We object to the usurpation of the title "freethinker" by the infidel, and of "freethought" for his system. The disciples of Jesus are the freest thinkers in the world. "If the truth make you free, you shall be free indeed." They are just as free as the truth. They think just as free as the truth. The truth is freethought. License is not liberty, nor is rejection of truth freethought, but slavery to error. Then we object to the lawless disciples of error, who are in bondage to its caprice, usurping these noble words. It is assumed that Christianity usurps the place of the truths of nature. The infidel can not name one truth of nature that Christianity has dethroned. The truths of morality do not usurp the place of the truths of physical science. It is assumed that it contradicts them. The infidel can not name one sentence of the New Testament that contradicts a single truth of nature. It is assumed that Christianity is superstition. It is religion, the normal expression and gratification of the regnant element of our nature, and the remedy for superstition. If religion be a perversion of our nature, what is its normal use? Comte and Mill confess religion is the normal use of an element in our nature. Christianity is compared to a disease, and extirpating it is like restoring a man to health. Now, there is a beauty in that comparison we want to consider. Evolutionists assure us man is the highest product of the law of evolution, that controls all things. We are to study this law, and conform to its ongoings in time-succession. They assure us, also, that man began in superstition. In religion. Then, according to the illustration, this supreme law of the universe, this law of evolution, that we are to study and conform to, has given us, as its highest expression, a lot of consumptives, a lot of creatures universally diseased and abnormal. How did the infidel rise above this abnormal and diseased, consumptive condition? How did he learn that it was a disease, and that his cough was not normal? How did he cure it? If nature, if the law of evolution that we are to study, and to which we are to conform, has given us, as its highest expression, a religious being, and religion, how did the infidel find out that, in this, its crowning effort, it is diseased and abnormal? What were his data, what did he study, what was his standard? If human nature be thus diseased and abnormal, how did he find it out? He must have a different nature from others. Then, if it has been so universally diseased, abnormal and deceived and deceiving, in what can we trust it?

The teaching of nature is that man is a religious being, religion is health, superstition is disease, and atheism is suicide. The atheist is like the mad-man, who would pluck out his eye to get rid of a stye on the lid. Christianity is a healthy use of man's nature. It cures disease, superstition, and saves from suicide, atheism. Then it is assumed that to remove religion, to remove the highest expression and declaration of his supreme law of evolution, to extirpate what has in all human experience been the regnant element of man's nature, is to restore it to health. It will then be able to receive food and assimilate it. Now we ask what truth can man receive after rejecting religion that he can not receive now? What influence will rejecting religion have on his receiving a single truth that the infidel offers? The offer is like that of a quack, who learning that a person has perverted food, especially that containing carbon and saccharine matter, should advise him to eliminate out of his food these elements, most essential of all to life and strength, that he may be able to receive and assimilate minor elements. Common sense would say that he should make a right use of these vitally essential elements, and not eliminate them. It would say that the elements left would be useless without the uses met by the elements it is proposed to eliminate. So in this case we advise to make right use of the regnant element in man's nature, religion, and it will aid in a right use of all the infidel prates so much about. It is absolutely necessary, as the ruling element, to a right use of what he continually harps over. The rejection of religion is no more necessary to a healthy state of the mind to receive science, art, philosophy and any other truth, than the rejection of all carbon or saccharine matter, out of food, is necessary to a use of the other elements. On the contrary a retention and proper use of religion is as essential to the perfection of other truth, and to their proper use and action, as these two elements are to the use and perfection of the action of other elements in food. It is assumed that religion usurps the place of the teachings of science, art and philosophy. Now, will he name one whose place it usurps? What single truth has he that the Christian has not as perfectly as he? Nay, we will say that the Christian has it in a sense that he has not, and a higher sense. Take any truth in science, art, philosophy or history, and the Christian has with it the ideas of religion, God as author of truth, of all truth, of all beauty, all goodness. He has an infinitely higher, purer, loftier and more spiritual idea of these truths than the atheist can have.

"But suppose we descend to particulars, to illustrate the fact, that for every false doctrine of Christianity we give the truth, fact or moral precept, of which the doctrine is a virtual denial. In place of the doctrine that all men are sinners through Adam's disobedience in eating an apple six thousand years ago, we teach that men are sinners or transgressors only so far as they disregard willfully the laws and conditions on which depend man's physical, intellectual and moral well-being." There are four misrepresentations in that extract. It misrepresents the Scriptural doctrine of sin. It represents Christianity as denying what he presents. It represents the Scriptural doctrine for sin as usurping the place of what he presents. It assumes what he presents to be a substitute for the Scriptural doctrine of sin. The Bible says man was created pure, and he must have been, if created by such a Being, as reason declares must have been his Creator. It declares he violated law. He disregarded the conditions of his physical, mental and moral nature. There was a first sin. This was followed by others. The consequences of this transgression affected man's posterity. Were hereditary. So teaches experience and common sense. Then there is no error in the Bible statement. It teaches as a part of the truth his doctrine, and his doctrine is only a part of the truth. There is no conflict, and he has substituted nothing for a particle of scriptural teaching.

"In place of the doctrine that there is no other way to be saved from sin than through the blood and merits of Jesus Christ, we teach that man can be saved from sin only by avoiding a sinful course of life; and that he will be far more likely to do this by trying to improve his own blood and merits than by depending on the blood and merits of any body else." Christianity teaches most clearly that men can be saved from the consequences of sin only by avoiding a sinful course of life. There is not an idea that he presents that is not presented by Christianity. Men have to improve their own blood and merits;—so Christianity teaches. But the order of history and nature is the elevation of the fallen and degraded and lowly by the self-sacrifice of the good and exalted. The atonement of Jesus meets a want in our nature that nothing else can. It is suited to man's wants. It saves man from sin. Would preaching evolution do what Christianity has to save men from sin? Christianity requires a man to be far more sinless than does materialism, and gives him the way demanded by his nature to accomplish it. But where did this writer get his idea of sin and righteousness and law and good? Not in his evolution of matter and force, in which the strongest survives. That gives no freedom, no moral quality, no moral action. He gets his ideas that he tries to wield against Christianity from Christianity. He steals them from what he would destroy. His system of evolution of matter and force would never give them. "Instead of the rite of baptism, we would encourage the practice of bathing, having more faith in the physical hydropathic qualities of water than in the spiritual efficacy of water, believing that cleanliness is of more importance than godliness." This statement is an insult to common sense. It represents baptism as substituted by Christianity for bathing. I can have all the bathing he can, all the hydropathic effects of water. All institutions have ordinances. This writer submitted to many when he became a Mason. Christianity has the ordinance of baptism—a beautiful and expressive symbol and rite of initiation. He can no more substitute bathing for baptism than he can combing one's head for an oath of inauguration. Again, while Christianity above all systems teaches purity and cleanliness, it is not true that cleanliness of person is of more importance than being in spirit like the perfect God. Nor do these conflict. The truly good person will be a cleanly person. They are not antagonists, as this writer represents them, but kindred excellences. This misrepresentation is all there is of this article.

"For the doctrine of regeneration, or the new birth, we propose to substitute general information respecting the laws of health and reproduction, so as to insure the generation of human beings under circumstances favorable to their physical and moral development, thereby rendering regeneration unnecessary. In short, we would have human beings born right the first time, so that nobody would imagine that they need to be born again." Now that is gross misrepresentation. The Christian can study the laws of being, and use all the means and knowledge that the materialist can have, and have his children born as perfectly as the materialist. There is nothing in Christianity that stands in the way. It, by its pure teachings in regard to this relation and parental responsibility, secures such results. After our children are born, Christianity gives them a guide in accordance with their nature. It regenerates them when born wrong. Materialism can not do this. When he has done all he can by natural law, children will need Christianity and its regeneration. "For prayer we substitute self-reliance and trust in the universality and uniformity of natural law. No manna comes by prayer; so we depend upon our own exertions for food. The lightning is not turned from its course by clasped and uplifted hands; so we look to the lightning-rod, rather than to the "Lord," for safety and protection in a tempest on land or at sea." This is gross misrepresentation again. Prayer is not in conflict with the uniformity of nature's laws. This whole materialistic misrepresentation rises no higher than food and material law and matter. Prayer is a part of a perfect moral government of God over his rational creatures, in which the matter that this writer deifies is the servant of spirit that he seems ignorant of. The Christian labors for food, and uses the lightning-rod as much as he does. Christianity does not conflict with this. This entire sentence is so gross a misrepresentation as to be a falsehood. The Christian has every use and knowledge of nature that the materialist has, and in the spiritual and religious world he has truth and blessings that the materialist ignores. He can make a higher and better use of nature than the materialist; for he can study and believe One who created and rules it.

"Instead of holding up to lazy and selfish people a heaven of idleness and psalm-singing in another world, as one would hold up a piece of meat for a dog to jump at, we teach the duty of personal effort on the part of all to realize our dreams of a true Heaven in this world—the only world (Christians, Spiritists and Free Religionists to the contrary notwithstanding,) that any body *knows* any thing about." This is full of misrepresentations. Christianity does not offer heaven to lazy or selfish people. It enjoins self-denial, self-sacrificing toil for others, as the way to reach heaven, because the way to fit-one for it. The idea of such characters reaching heaven is repugnant to its entire spirit and teaching. It does not teach that eternity in Heaven will be spent in idleness and psalm-singing. I do not read it in the New Testament. The idea that Christianity presents Heaven to such persons in such a way is an insult, and can only be excused on the ground of ignorance, which itself is inexcusable. The Christian can make a heaven of this world as well as the materialist, and, indeed, he alone can. Where did this writer get his ideas of morality and goodness and self-sacrifice, that will make a heaven of this earth? Certainly not in an evolution of irrational matter and force, by means of a brutal, selfish struggle for life, in which the strongest survives? What is the materialist doing to make a heaven of this world? Where are his missionaries? his Young Men's Christian Associations, Sunday Schools, reformatory associations, and movements to make the world better? Where are his martyr philanthropists? Boasting that they have the numbers and wealth, they do not spend for humanity one dollar where the Christian, so caricatured in this article, spends tens of thousands. Making a heaven of this earth, as Christianity proposes to do, and in the only way it can be done, is the way to prepare for the future world; and preparing for the future world is the way to make a heaven of this world, just as making a right use of youth is the way to prepare for manhood. How would it sound to say to the child: Instead of holding up a noble manhood, as a piece of meat for a dog to jump at, before your lazy inclinations, we will teach you to make all you can of youth? Can a noble manhood encourage idleness? Is not preparing for it the right use of youth?

"Instead of attempting to frighten children of various ages with the wicked vagary of a lake of fire and brimstone, in which God will punish his children eternally, for their mistakes and fallacies, we endeavor to deter men from wrong-doing by showing that nature punishes every-where those who disobey her mandates, that she judges the offender without the delay or circumlocution of court trials, and executes her sentence with simplicity, directness and the most rigid impartiality." The Christian knows and believes in the laws of nature, as established by God, as much as the materialist. He knows men do not receive in this world all the punishment due their crimes, in a majority of cases. He believes in a righteous ruler who rules in the moral world, and will, with infinite wisdom, render to each man according to his works. But let us take out that convenient personification and read it as the materialist ought to present it, "We deter men from wrong-doing by showing that blind, irrational matter and force every-where punish those who disobey their mandates, that they judge the offender and execute their sentence with simplicity, directness and impartiality." In such system can there be any mandates, judgment or sentence, or execution of sentence? There is a machine of blind matter and force. Man cheats it out of all the gratification he can and avoid being crushed. If he makes a miscalculation the machine crushes him. Any talk of law, or judgment, or sentence, is absurd. All this is stolen from religion, and used in a piratical attempt to destroy it. "Instead of exhorting men to prepare for death, we try to teach them how to live, believing that a faithful discharge of the duties of this life is the only sensible preparation for death that can be made." Again, we have misrepresentation in presenting things as antagonistic that are not. Christianity teaches that a faithful discharge of the duties of this life is the preparation for death, and it tells how it is to be done, in discharge of our duties to God, our fellow-men, and ourselves. Materialism would not have the idea of duty in this life, except as it gets it from religion. Its brutal struggle for life with survival of strongest, never gave the idea this writer stole from religion.

"In the place of the ordinary observance of the Sabbath, we favor spending the day in a natural pleasant manner—making it a day of rest and recreation, of pleasure and profit, allowing every one to follow the bent of his own inclination, provided he does not interfere with the rights of others." Would you have any day at all? Christianity teaches man to spend the day in rest and recreation by cultivating his higher nature and his spiritual well-being. Is there no recreation or profit except in mere material physical pleasure? Worship of a perfect being, elevating praise and song, and listening to the most exalted themes of morality and religion, is a rational way of spending the day. All should be inclined to spend it in that way. Then Christianity gives us the rational method, and where it is observed in that way people have rational enjoyment in it, and there alone. "Instead of building churches and dedicating them to the Lord, we prefer to build school-houses and institutions of useful learning, and devote them to the advancement of man." There is inexpressible impudence in that statement. Does building churches interfere with building school-houses and institutions of learning? We can have churches in which the highest instruction is given, on the highest topics, moral and religious education, and have school-houses as well as the infidel. We have the most schools where we have the most churches. Churches have given rise to education and schools. They have followed the work of churches. Christianity and Christian benevolence founded the first schools and our colleges. How many colleges has infidelity founded? How many mission schools in this or in heathen or other lands? It has not a college to day except where it has stolen, by hypocrisy, in professing to believe what it did not, schools founded by Christian benevolence. Infidelity rules in many schools now, but it stole them, by hypocrisy, from Christian beneficence.

"For preaching of theologians, who are harping continually on the mysteries of another world, while they are unable to give us any information respecting matters of interest in this, we are trying to substitute the teachings of scientists, philosophers, poets, agriculturalists, mechanics, the teachings of men whose studies and pursuits qualify them for public educators. As a substitute for the fables of the Bible we offer the curious and instructive facts of modern science, astronomy, geology and chemistry. Such is our answer to, What will you give us in the place of Christianity?" Again, we have the same dishonesty in representing things as antagonists that are not, and that Christianity will have to be removed before this work can be done. Preachers know as much of this world as the infidel. We have six days for what he prates about, and one day for the exalted themes of religion and morality. We have as much of the instruction of scientists, philosophers, etc., as the materialist has or can have, and religion teaches us how to make a right use of them, and gives to them a meaning that materialism can not. We have the most of these things where we have the most Christianity. Theologians have been the best educators of the world, and its leaders in thought. We can have all the science the infidel can, and the Bible for man's religious nature and moral nature, and to give a use of these things that he can never have.

Then we protest against assuming that religion is a perversion of man's nature; against assuming that it excludes a single idea—that this writer offers in its place; against the utter dishonesty of representing it as an enemy of one of these truths; against claiming that it must be rejected to enable us to have and use these truths; against the infidel impudently arrogating to himself the learning science and the schools and reforms and philanthropy of the world; against his offering to us, instead of Christianity, what Christianity gave to us, and we have already in consequence of Christianity. Colonel Ethan Allen was taken prisoner during the Revolutionary war, and taken, in chains, to England. As the ship was leaving the shore of America, a British officer said to Allen, who lay manacled on deck, looking at his native land for, perhaps, the last time: "Allen, if you will quit the rebels, and do all you can for the king, he will give you all the land you can see off there in New Jersey." "That reminds me," said Allen, "of what I read in the good book. The devil offered the Saviour of the world all the world if he would worship him. The rascally old scoundrel did not own a foot of land or a thing in creation. They all belonged to the one to whom he offered them, and he had been trying to steal them for thousands of years, and every thing he had in his clutches he had stolen from the one to whom he now offered them." The offer of this infidel writer, to give us certain things instead of Christianity, is precisely like it. And as the rightful owner said to his impudent, deceitful tempter, so we say to all such offers, "Get behind us, deceiver. It is written, 'Thou shalt worship the Lord thy God, and Him only shalt thou serve.'"

Materialism and Christianity Contrasted.

Man has to solve in his life these problems: I. Ethics or morals. II. Philosophy—mental science in all departments—physics or natural science in all departments. III. Politics or government. IV. Family or domestic institutions. V. Society or social and neighborhood relations. VI. Arts, fine arts, and the useful arts. His nature, surroundings and wants compel him to attempt a solution of these problems, and he has to make a practical essay at their solution in his life. Two systems or modes of thought have controlled men in their solutions of these problems, and the systems they have wrought out in solution of them—the religious or spiritual, and the irreligious or materialistic. All systems of religion have accounted for the origin of existences and phenomena, which is the basic idea of all else, and have based all these problems on the idea of divine power, authority and government. This idea has determined the solution of all these problems, and molded and controlled the constitution of the family, the society, the state, and also the morals, arts and science and philosophy of mankind, from his earliest history until the present hour. Materialism gives an entirely different answer to the basic idea, the origin of existences and phenomena, and, of course, when logically developed, which has never been done, because men have been influenced by religion even when repudiating it, it must have an entirely different idea of man's nature and relations, and this will of course cause an entirely different solution of the problems of morals, science, philosophy, mental and physical, and of the arts. It will have an entirely different system of morals, family, government and society. This must be the case, from the nature of things. If the fountain be entirely different in nature, its waters must be also different from those of another fountain. Men's opinions concerning this matter are not mere private speculations, that have no practical influence. It is not like a speculation concerning whether the planets be inhabited, or the undulatory or emission theory of light or heat. They affect man's interest more than a belief or disbelief of the Copernican theory of the universe. They determine all morality, moral and mental philosophy, all science, art and the family society and the state. If logically developed, these two systems would give as different results, as different solutions of these problems as can be conceived, as radically different and antagonistic as light and darkness. As we are asked now to cast religion to one side and accept materialism, let us contrast the two systems. Let us look before we leap, especially into the dark, over such a precipice.

Christianity is the most perfect of the various systems of religion now in existence. It is the one with which materialism wages its most relentless war. It is the religion that now disputes with materialism the mastery of the minds and hearts of our people. The civilized world has to choose between these two systems, and a fair contrast of the two conflicting systems will aid us in making the choice intelligently. As fundamental to the choice there are certain universal affirmations of reason that must be conceded. There are in the very nature of things such distinctions as the true and the false, the good and the evil There are more than imperfection, lack of development. There are positive falsehood and evil. The good and the true alone are beneficial. The evil and the false are ever injurious. It is only by the rejection of the false and the evil, and the choice of the true and the good, that progress, development and happiness can be secured. There can be no neutrality, no idleness. There must be active choice of the true and practice of the good. A neglect to search for the true and the good, and choose and practice them, leaves one in the power of the false and the evil, and he also fails to fit himself for and enjoy development and happiness. If there be a God, man's duty is three-fold, to God, his fellowman, and himself, and these duties are inseparable. Man is to a certain extent at least, able to learn and discern the good and the true, and the evil and false, and able to choose between them. He is, to a certain extent at least, free, responsible and accountable. He could have no morality if he were not. His belief affects his conduct, especially belief in regard to the true or false, good or evil. He is responsible for his belief, to some extent, at least. He must search for, have, choose and practice the true, beautiful and good. We are not safe when we are sincere. Nor when we think we are right. Nor when we do as well as we know how. We must be right. We must know the true, beautiful and good, and be sincere in them. Practice them as well as we know how, when we know the right *how*. Materialism can not be tried by the lives of a few select atheists, or materialists. A man may be better than his system, especially when he was educated and formed by another system, as was the case with atheists. We can only decide when men have been raised in atheism, entirely unrestrained or uninfluenced by religion, and have developed in their lives, unhindered, for generations, the tendency of their system. The two French revolutions can be regarded as indications, and only as indications.

Materialism presents as that which is self-existent, independent, self-sustaining, and eternal, and the origin of all things, blind, irrational matter and force. Christianity presents Spirit, Mind, or Intelligence, Absolute Spirit, as the self-existent and absolute Being and the origin of all existences and phenomena. When logically developed these two systems must give diametrically different results.

Materialism denies all existence of mind or spirit, except as a phenomenon or function of matter, or a different manifestation of the one physical force pervading nature. It denies the distinction between the knowing mind and known matter, between the body or the material organism, and the spirit or mind that animates and uses it, and knows that it is distinct from the body, in which it resides and uses. Christianity is based on this intuition of a difference between matter and mind and physical force. It is based on the distinction made in consciousness between the knowing mind and known matter. Between the body which it declares to be the tabernacle, house and instrument, and the spirit, which resides in and uses it. It regards the spirit as conscious, intelligent, rational, willing, responsible, and the inner man, the real person. All its morality and ideas are based on this distinction made by universal consciousness and intuition. Materialism denies man's freedom, spontaneity, and free agency, and if consistent, his responsibility, and the reality of the distinctions between good and evil, truth and falsehood. It denies all basis for these ideas, and for the ideas, praise and blame, reward and punishment, and character, and if consistent denies their existence and reality. There can be no basis for them in materialism; and if it has these ideas and uses them, it steals them from religion, which it seeks to destroy. Christianity is based on these intuitions, these fundamental ideas. It regards man as a free, moral agent, as human consciousness has ever declared. It is based on the intuition of universal reason, that all things are either true or false, good or evil. That all acts are good and worthy of praise and reward, or evil and worthy of censure and punishment, and that human conduct has character, that man has character, and is responsible and accountable. Materialism makes what it falsely and deceitfully calls man's moral nature, stealing the idea and term from religion, inhere in man's material organism. It must either deny all moral ideas and all moral nature, or attribute them to blind, irrational matter and force, or make matter and force evolve what is not in them. Christianity makes the conscious, rational, willing spirit, the real man, and makes the spirit the source of all moral action and character, and mind the source of all things, and has an adequate and rational basis for character, morality and good and evil. Materialism can not divide things into good and evil, true or false. It has no basis for such distinction. If all things were evolved, there is no distinction between them of a moral nature. It denies, if consistent, all such distinction, and removes all such distinction and basis for it. If it makes it, it steals the idea and the standard from religion. Christianity is based on such a distinction of acts and things. It furnishes the only basis for such distinction, and the only standard for making the division.

Materialism, having its origin in an evolution of all things out of blind, irrational matter and force, and by blind, irrational matter and force in a struggle for life in which the strongest survives, has, as its highest standard, selfish prudence, the standard of brutes. It makes no distinction between men and brutes except in material organization. Its only possible standard is selfish, brutal, and degrading. It destroys all idea of devotion to the good and true and beautiful, in opposition to selfish prudence, and for their own sake. In fact, it renders their existence impossible. It makes self-denial, self-sacrifice, and self-abnegation for the good and true a folly and crime, for they are a violation of its supreme law, survival of strongest in a selfish struggle for life. Martyrdom, patriotism, philanthropy and devotion to the good of others are follies and crimes, for they are violations of the supreme law. If it uses *these terms*, or commands such acts, it steals them from religion, for it has no basis for them, would never suggest them, and they are in violation of its supreme law. The standard of Christianity is the will of an Infinitely Wise, Holy, Good and Loving Father in Heaven. It tells us man was made in his mental and moral likeness It elevates man infinitely above the brutes, and gives him a standard infinitely above the standard of brutes. It elevates man into love and righteousness. Let us present the basic ideas of Christianity in detail, and contrast them with what materialism presents in their stead. Christianity is based on, as its idea of ideas, a perfect and complete revelation of an All-perfect Being, or a God, infinitely perfect in being, character and attributes. Admitting the anthropomorphisms of the Old Testament, which were a necessity on account of man's condition, the character of God unfolded in the New Testament is perfect. This idea was gradually unfolded and developed to perfection—unfolded by object lesson and illustrations, until a clear spiritual revelation was made, and a clear spiritual apprehension reached. Man needs as the one want of his spiritual nature, this Being as an object of awe, veneration, adoration, worship, devotion, and love. As a perfect model and ideal. As a dynamic lifting-power in heart, life and soul. Materialism has nothing to correspond to this. One writter says he looks in the mirror and sees the only God he worships there. Its highest worship is selfish worship of sinful human nature. Christianity reveals to us the ennobling truth that man was created in the mental and moral likeness of the Infinite Creator. It clothes man with inexpressible dignity and grandeur. Materialism says man sprang from a hairy arboreal ape, with powerful canine teeth, that was engaged in a brutal, ferocious struggle with the ferocious animals that surrounded it. From such a condition he emerged through brutal instinctive animalism into brutal idiotic savagery, and from that to his present condition.

Christianity reveals the Universal Fatherhood of God, and the reasons on which the relation is based. He is the Creator of men, the maker of their bodies and the giver of their spirits. He possesses in infinite perfection the mental and moral likeness in whose image man was created. He gave his Son, our Elder Brother, to redeem man. He is the common object of veneration, devotion, and love of all men. He is the author of the glorious scheme of the Gospel for the regeneration of all men. Materialism reveals the ancestry of man in the Simian and the Ascidian and the fiery cloud of chaos. It has not a suggestion of one of the exalted thoughts on which the paternity of Christianity is based. Christianity reveals the universal brotherhood of man and bases it on exalted and ennobling ideas. Men are the children of one common, infinitely perfect Father in Heaven. They wear a common mental and moral likeness of this infinitely perfect Father in Heaven, in whose image they were created. They were redeemed by one common Elder Brother, Jesus, the only-begotten Son of God. They have one common system of religion, worship of their Father in Heaven. They have one common destiny, a glorious immortality. Materialism denies this common brotherhood often, or finds it in a common origin in the Simian or Ascidian. It has not one of the ennobling ideas on which the ennobling idea of Christianity is based. Christianity has the most exalted object that mind can conceive or heart cherish—the elevation of all men into universal love and righteousness, by the development and expansion of this mental and moral likeness of God, in which man was created, by love and practice of righteousness and goodness. Materialism utterly lacks this idea. It has no basis for it in its selfish struggle for life in which the strongest survives.

Christianity makes man a co-worker with God in this glorious work. Again we emphasize the inexpressible dignity and grandeur with which Christianity clothes man, in giving to him so glorious a work, and so exalted a position as a co-worker with God in it. Materialism has no idea to correspond with this. Man is to study the ongoings of matter and force in time-succession, and, instead of working with an Infinite Being, he is to avoid being crushed by the remorseless monstrous machine. Christianity teaches man that he is to accomplish his own elevation into love and righteousness, by giving himself in loving self-sacrifice, toil and self-denial and devotion for the elevation of others. It teaches the martyr's zeal and devotion, the philanthropist's sacrifices, as the noblest of virtues, the height of wisdom, and gives the only motive that can cause them. Materialism teaches that man is to study the ongoings of nature in time-succession and accommodate himself to them, and, by selfish prudence in the struggle for life, get all the selfish gratification he can. It makes the acts of the martyr, patriot, and philanthropist a folly, a violation of the supreme law of nature, a crime. Christianity teaches that all things were created by God our Father in Heaven, Infinite in Wisdom, Power and Love. Materialism teaches that all things are the result of the irrational happenings of blind, irrational matter and force. Christianity teaches that all things are governed in wisdom and law by our Father in Heaven. Materialism teaches that all things are under the control of fatal, iron necessity, or the blind, fortuitous ongoings of blind, irrational matter and force. Its talk of law is utter absurdity. There can be no law or basis for law in such a system. Christianity teaches us that there is a rational personality apart from matter, or there is spirit. It teaches that we can look up to God, who is infinite Spirit, to Christ, to the Holy Spirit, and to angels, and that we have spirits like them in nature. Materialism denies all this, and teaches that mind is but a function of matter, and what we call spirit is but a modification of physical force. It turns our thoughts down to the force seen in animals, vegetables, and in physical nature. From this we came; to this we return. Christianity assures us there is an eternal future life, in which we will spend an eternity in making endless approximations to the infinite perfections of the Divine Mind, in whose mental and moral likeness we were created. Materialism declares, "What went before man, and what is to follow after him, are to be regarded as two black impenetrable curtains, which hang down at the extremes of human life, and which nothing has ever drawn to one *side*. A deep silence reigns behind these curtains. When once within, no one will ever answer those he left behind. All you can hear is a hollow echo to your own question, as if you had shouted into a yawning fathomless chasm."—*Holyoake.* Christianity teaches men that they are free in volition to choose truth or falsehood, good or evil. It clothes man with the dignity of rational freedom, governed by intelligence and motive. Materialism makes man a part of material nature, and denies and scouts all idea of freedom.—Man's actions are a part of the necessitated ongoings of nature. Christianity teaches that there is moral desert in action and character. Materialism has no basis for it, renders it utterly impossible and utterly denies it. Christianity teaches that acts can be divided into voluntary and involuntary, and the former into good and evil; and that all things can be divided into true or false, good or evil; and that there is character to all intelligence, and that it can be divided into righteous and good, or sinful and wicked. Materialism makes all acts alike necessary, and renders impossible all distinctions between good and evil; for all things and acts are alike evolved. It denies and renders impossible all distinction in things, acts or character. Christianity teaches that all men are responsible for what they do. They are accountable to God, as Lawgiver, Ruler and Judge. It teaches absolute cognizance of every thought, word and deed. All this is known to Infinite Wisdom and Justice. Materialism teaches that men are to learn to accommodate themselves to the ongoings of blind, irrational matter and force. There is no responsibility, no accountability, to Intelligence,—there is no Lawgiver, Ruler or Judge. Christianity teaches retribution by Infinite Wisdom, Justice and Power, as Executive, perfect rewards and punishments, in this life and in the eternal life. It has perfect and absolute sanction in this. It has perfect and absolute authority in being the will of an infinitely Wise, Holy, Just and Powerful Being. Materialism has no retribution. If you do n't keep step with the machine, it remorselessly crushes you, but there is neither reward nor punishment. No righteous rewarder, no righteous avenger. Get all the selfish gratification that you can; cheat blind nature out of it, and you have obeyed the supreme order of things—a selfish struggle for self, in which the strongest succeeds.

Christianity teaches that God, as our Father in Heaven, exercises a providential care over his creatures and works; and that he exercises a paternal providence over his rational creatures, made in his own image that he does not over mere material nature. Strauss, the apostle of the new faith of materialism that is to take the place of Christianity, says: "In the enormous machine of the universe, amid the incessant hiss and whirl of its jagged iron wheels, and the deafening crash of its ponderous stamps and hammers; in the midst of this whole terrific commotion, man, a helpless defenseless creature, finds himself placed, not secure for a moment that on an imprudent motion, a wheel may not seize and rend him, or a hammer crush him to powder. This sense of abandonment is at first something awful!" Christianity teaches that, as his children, we can and should pray to our Father in

Heaven, and that He, as our Father in Heaven, will hear and answer our petitions, wisely and in true love, as a wise parent should. Materialism, through Holyoake, its leading English apostle, declares: "Science has shown that we are under the dominion of general laws, inexorable laws of unyielding necessity, evolved by irrational matter and force. There is no special providence; prayers are useless; propitiation is vain. Whether there be a Deity, or Nature be Deity, it is still the God of the iron foot, that passes on without heeding, without feeling, without resting. Nature acts with fearful uniformity—stern as fate, absolute as tyranny, relentless as destiny, merciless as death;—too vast to praise, too inexplicable to worship, too inexorable to propitiate, it has no ear for prayer, no heart for sympathy or pity, no arm to save!"

Christianity reveals sin as a fact and evil, as a reality in the lives, conduct and experience of men. It gives a clear revelation and clear teaching concerning the nature of sin, and a perfect standard for testing and deciding what is sinful. It consists in rebellion against the Supreme Authority and just law of God. In selfishness and love of self, and devoting life to self. Love of evil and impurity. Hatred of holiness and justice. Materialism denies the existence of sin and evil, for it makes all things and acts alike, the evolutions of blind, irrational matter and force. All are on an equality, and are alike without character or moral quality, for there can be no standard and no difference in nature. Christianity teaches that God, as our Father in Heaven, has revealed Himself, His character and will, as a means of saving us from sin, as a means of giving us a perfect religion, and a perfect rule of life. Materialism tells us we are left to the gropings of our erring, doubting, sinful natures, in the gloom of irrational matter and force. Christianity teaches that God has revealed His will and scheme of redemption by inspiration of chosen men, thus making man a co-worker with Him, and giving to revelation a human element, suiting it to man's nature. Materialism scouts all such idea, and leaves man to get his inspiration from studying the ongoings of blind matter and force. Christianity teaches that God manifested Himself in miracles, giving evidence of His presence, and credentials of revelation, by making a higher use and display of nature and nature's laws than man could make, thus cultivating man's religious nature, and awe and veneration. Materialism makes a fetich of matter and force, and their ongoings too sacred to be modified by intelligence, and for the highest wants of intelligences, even if a higher and more exalted use of nature be made by superior intelligences for the highest wants of man.

Christianity teaches that as our Father in Heaven, God has given to man warning of future events; cheered him with promises of future blessings, and sustains and solaces him in trial and danger with prophecy. Materialism leaves him to grope his way in doubt and perturbation, amid the ongoings of blind, irrational matter and force. Christianity takes the universal custom and idea of sacrifice, and does away with all sacrifice of life and shedding of blood, by a perfect sacrifice, the Son of God. It requires of men that they present their bodies a living sacrifice, holy and acceptable to God, and their spirits as sacrifices in praise and worship and living righteous lives, and all their labor in devotion to righteousness, love and goodness. Materialism declares our nature a delusion and a cheat in this idea of sacrifice, mocks this catholic idea of humanity, and knows nothing of the sacrifice of body, life and spirit required by Christianity. It has no basis for it in its materialistic, sensual, selfish system. Christianity gives to us a perfect expiation and atonement, in the Son of God. In this it accords with the law of nature and experience, that elevation and salvation have come through the sacrifice of the good and exalted. It exhibits God's abhorrence of sin, his regard for his law, the enormity of sin, and it appeals to the human heart as nothing else can, or has. There is a power over the human heart in the cross of Christ, and his sufferings for the sins of his enemies, that nothing else ever had. Materialism ridicules and bitterly assails this idea, exactly suited to man's needs, and so dear to the human heart. Christianity presents to us a Mediator, the Son of God, thus meeting the great want of the human heart, and giving man confidence to approach God for pardon, and to secure his favor and love, and confidence to begin a life of reformation and righteousness. Materialism also ridicules this idea, and declares that man—erring, sinful man—is his own Christ and his own Saviour. Christianity presents to us, Jesus the captain of our salvation, as a leader in religion and in life, and reformation of the individual and the race. It thus meets a want of the human heart. All revolutions and great movements have had and must have such leader. Materialism leaves this want of the heart unsatisfied. It can not rally or unite the heart of humanity in such a reformatory movement. Christianity gives to us a personal embodiment of doctrine and life, a perfect example in Jesus of Nazareth. This is a want of humanity, for man learns more by example than precept. Truth must be incarnated in a life, especially moral truth, to have a saving power. Materialism does not meet this want of mind and heart. Christianity presents a perfect object of faith, gratitude, devotion and love, in Jesus of Nazareth. This is *the* means of regeneration and salvation of men. It is by faith in, love and gratitude for, and devotion to, an exalted person, an embodiment of life and truth, and a leader in reformation, that men are saved and reformed. It has been so in individual life and in revolutions and reformations. Materialism utterly lacks all this. Its selfish system, that places man at the head of an evolution of matter and force, utterly rejects all such idea. It can not reach and elevate human heart and life by such faith, devotion and love. Christianity makes eternal, absolute and perfect this atonement, this sacrifice, this Mediator, this Leader, this embodiment of life and doctrine, this object of faith, devotion and love, by incarnation, or making him God, manifest in the flesh, Jesus of Nazareth, who stands between God and man with one hand reached down to humanity, struggling in sin, doubt and fear, giving it confidence by the human side of his nature to approach God for pardon, and to begin a life of reformation and righteousness, and with the other hand laid on the throne of the Eternal, giving man confidence to rely on him as a perfect Saviour, because divine. Materialism utterly rejects and scouts this idea that is needed by humanity as its one want, and is a power in human life in salvation that is omnipotent and eternal.

Christianity offers to men redemption from evil, salvation from the love of sin, the practice of sin, the guilt of sin, the punishment of sin. Materialism denies the reality of sin, in opposition to the feeling of every heart, and offers no redemption. Study nature and keep step with the machine. Christianity requires an entire reformation of nature, thought and conduct, heart and life, so radical as to be expressed only by regeneration, being born again. Materialism scouts and ridicules this idea, and has no means or basis for reformation. It would never produce it. Christianity teaches that if men repent from the heart, and forsake sin, God, as their Father in heaven, will forgive them, and aid them in a life of reformation and righteousness. Materialism denies all forgiveness, and has no basis or hope for it. Christianity furnishes to men a perfect system of universal and eternal truth to be believed, a perfect system of adoration and worship of a perfect Being, and a perfect rule of life, giving perfect teaching concerning man's duty to God, his fellow-man, and himself. Materialism has nothing of this sort. Man is to study physical nature, which would not give him a moral idea or truth, or rule for conduct, except selfish prudence. Christianity gives to man the church, perfect in its organization and officers, with perfect ordinances and services, preaching and teaching, perfect truth in morals and religion, and exalted and eternal themes of thought, cultivation and elevation, prayer, praise, benevolence and holiness of life. Christianity requires, at man's hands, a perfect consecration of life. Love to God with his whole being, and his neighbor as himself, a life molded and regulated by this rule of life, which is perfect in teaching and model. Materialism lacks all this. Christianity presents, as the end of labor and work, the elevation of the race into love and righteousness, and men are co-workers with God in this, giving themselves, in loving self-sacrifice, for this end. Materialism, with its selfish, sensual origin and supreme law, has not a suggestion of this. It condemns it and renders it a fallacy, a crime, for it is a violation of its supreme law.

Christianity gives us faith, belief of, and trust, reliance and confidence in an exalted being, as the animating principle of life; hope of a glorious immortality as the animating aspiration of life; supreme love to God, and love to our fellow-men, as the animating motive of our life; and supreme felicity as the end and reward of being. Materialism has no basis for one of these, and utterly rejects them. Christianity accords with the principle of our nature that demands that all exalted and ennobling relations be based on faith, and be matters of faith. Love of husband and wife, parent and child, friendship, and all ennobling relations are mere matters of faith. Materialism, being a system of sense, and discarding faith, paralyzes and palsies the ennobling feelings and relations of heart and life. Christianity saves men through humility, self-sacrifice, love, devotion and gratitude, which is the only way of saving men. Materialism, placing man at the head of all existence, and with its law of selfish prudence, is utterly repugnant to this, the only way of elevating and saving men. Then Christianity takes the catholic ideas of man's mental, moral and religious nature, strips them of all error, gathers all in one system, elevates and expands them into universal truths, universal and eternally applicable principles, and is suited to man's needs and wants. What it has done for man, which materialism now tries to steal, proves it to be the system for humanity, the perfect rule of faith, life and conduct. Materialism is utterly lacking of all these elements and destructive of this life-giving, soul-saving power.

Conclusion.

We will part from the reader, who has patiently traveled with us, so many times, the long path of evolution so obscure in many places, and who has, with us, crossed the chasm which creative intelligence alone could bridge for us, with a summary of conclusions reached. The issues examined have been the Nebular Hypothesis, and especially the atheistic use now attempted to be made of it; the Evolution Hypothesis, giving special attention to the Darwinian Hypothesis, as the leading feature in the Evolution Hypothesis; and the Hypotheses of Geology that are used to contradict the teachings of the Scriptures, such as the antiquity of man, the order of creation, the length of the periods of creation; and also the Atheistic Hypothesis of Historic Development. The author has no wish to stop the investigation of the data on which these hypotheses are built by their advocates. On the contrary, he would encourage it all he can. He would not stop it, if he believed it would overturn all religion and revelation, for in such a case it would demonstrate their falsity, and he would, above all things, desire to know it, if such be the case, and to reject them. If materialism and atheism be true, let us find it out, and know it, and the sooner the better. What he objects to is the use that is attempted to be made of these hypotheses. They are but inferences, guesses, made from a partial investigation of but a small portion of the entire phenomena, that must be thoroughly and all investigated before they can be established. Their advocates demand that we accept them as demonstrated, established, scientific truths. Also, that we base our science, and, as a necessary result, our morals, society, life and thought on them, as basic, fundamental truth. Not only this, but they demand that we unship the intuitions of all humanity, from its infancy until now, cast to one side the faith, the thought, and the experiences of all generations of men, for these hypotheses, these guesses. It is against this that we protest. We have urged objections to these hypotheses. We showed that they were not proved; that we have not sufficient data for them, nor is the data sufficiently examined. We have exposed the radical defects of their advocates, in not investigating the entire data, and the very data that should be examined. Also, in not using the methods and standards that are the very ones to be used. We have showed wherein they have assumed as known what was unknown, and from the nature of the case could not be known. We have showed where they involved the absurd, contradictory and false. We have done this for two reasons. First, to show that the advocates of these hypotheses have no right to make the infinite demand on us they are making. Second, to show to them what must be done, what must be removed out of the way, and what must be established before we can comply with their demand. We remand the theories to them, demanding that they do this work before they make such an illimitable demand on our belief and conduct.

We want to leave with the reader this thought: That these hypotheses have not one particle of scientific proof, and are not science. They are guesses, inferences from partial data but imperfectly examined. They can not be made a part of mere physical science. When physical science can investigate such phenomena as are claimed in these hpyotheses actually transpiring, then they became a part of physical science. When physical science can point to such phenomena now actually transpiring, it can demonstrate these theories by methods of physical science. But since physical science has not done that, and can not, these hypotheses can never become merely a question of physical science. Physical science furnishes the phenomena and their characteristics. Rational thought or metaphysics, by its inductions, must settle the truth or falsity of these hypotheses concerning the origin and cause of the phenomena. It is purely a metaphysical question. Scientists sneer at metaphysics, but what are their hypotheses but metaphysics, and the weakest class of metaphysics, mere inferences from the data, mere guesses. The utmost that can ever be done is to change them into clear rational inductions. When that is done all should accept them. But never until that is done. Then these hypotheses are mere metaphysics. Their name hypothesis, inference, guess, declares that, and they are the weakest of metaphysics. Then let the scientist cease to use them, as a part of physical science, for they are not, and never can be. Let him change them from mere guesses to clear inductions, before demands thatwe accept them, much less base all science, morality, conduct, and life on them.

The testimony for these hypotheses is what is called circumstantial evidence. It is not, and never can be, positive evidence, until we are pointed to such occurrences transpiring in such a manner as is claimed in the hypothesis. The rules for testing circumstantial evidence are these: Let the reader note them carefully, and refuse to accept the hypotheses, or at least to base important action on them until they have fully met these tests, severely and thoroughly applied. I. There must be many facts pointing in the *direction* of the theory, and they must point very strongly in the *direction* of the theory before any one is warranted in advancing or advocating the theory, much less demanding that people act on it, or base important action or interests on it. Here all these hypotheses are fatally defective. But a small portion of the facts are known, and they do not point strongly in the direction of the theory. The facts that it is especially necessary to know to sustain the theory are unknown, and the author believes they never can be known. II. To change the theory into a demonstrated truth, all the facts must be known. So long as any are unknown, it can not be more than a theory, for the unknown facts might utterly disprove the theory. This is exactly the case with these hypotheses. But a small portion of the facts are known. Those that must be known to establish the theory are unknown, and the author believes they ever will be. Then these unknown facts might disprove the theories, and the author believes they would totally contradict them. III. There must not be facts that raise insuperable objections, or strong presumptions against the theories, for the theories are mere presumptions themselves. There are undeniable facts that raise strong presumptions against these theories—that raise insuperable objections—indeed, that flatly contradict them. IV. There must not be in the theories when logically stated, nor in logical deductions from them, the absurd, contradictory and false. There are in all these theories, when logically stated, and also in logical deductions from them, the absurd, the contradictory, and the false. V. The theories must not be based on supposition, either wholly or in part, for the supposition may not be true. These theories are all of them based partly on supposition, and indeed almost wholly so. Their most essential and important features are based on suppositions that may be false, and we have strong reasons to regard as false. VI. There must be no other theory that will explain the facts. We must be necessarily shut up to that theory, and that alone, for if there are other explanations of the facts, the theory is worthless, for another explanation may be true. Here these theories are fatally defective. There are other theories that will explain the facts, and far better than they. Indeed the other theory is the one established by clear inductive reasoning, and the only one reason can accept.

VII. The theories must not be expanded in enunciation beyond what can be clearly deduced from the facts. Here is the fatal defect of these theories. They bear no more proportion to the facts on which they are based than the boundless and unnumbered assumptions of modern spiritism do to the facts in it. VIII. The theory must not be expanded in application beyond what it legitimately covers. Here is a radical defect in these theories. Their expansion in application is like trying to cover the heavens with the outspread hand. IX. Finally, so long as it is merely circumstantial evidence, we are not warranted in basing vital action or consequences on it, unless we are compelled to act, and it is the only theory, or the strongest one; but until compelled to act, we should wait for further proof, and be passive in regard to the theory while awaiting such proof. As already said, here is the arrogance of the advocates of these theories. They not only advocate them, but they ask us to risk vital interests, indeed, all interests on them. They do this, when not only are we not compelled to act, and when they are not the only theory, but when there are other theories, and one that is far stronger, and is indeed the only one reason will accept, and the one that has clear, inductive proof, and is the one on which man has ever acted. Let the reader bear these tests in mind, and apply them until these theorists—either show that we are shut up to this theory, and must act on it, or change it from a theory to a demonstrated truth, established by clear induction.

Finally, these theorists make a most radical mistake when they assume that even if their theories were true, concerning the methods of cosmical evolution in the nebular hypothesis of systems and worlds, and the first evolution of our planet, and its substances and the laws by which they are controlled, and their processes; and that life was produced, and all species and varieties, as they claim in physiological evolution; and that their hypotheses in regard to the order of production of life, and the period taken, and the age of man, and the theory of historical development were true; that it necessarily proves that intelligence had nothing to do with the origin and course of evolution, and the present order of things. It would increase rather than decrease the evidence of intelligence, the necessity for intelligence, and our conceptions of the degree of intelligence displayed. This is a radical error. Let the scientist go on with his investigations, and when he has changed every hypothesis into scientific truth, established by clearest induction, it will not affect one particle the evidence for the existence and action of Absolute, Intelligent Cause, nor the fundamental ideas of the Scriptures. Men may have to change their notions of God and his modes of action and their interpretations of the Scriptures. It may be that dogmas that are now regarded as fundamental Scriptural truths may be abandoned, and be regarded as accommodations to human error, weakness and methods of thought and ideas in early ages, or even as human errors incorporated into the Scriptures with the truth they contain, but still theism and its catholic and universal ideas and their perfect development in Christianity will stand forever. But the author fears no such results as are indicated in this paragraph, as his previous utterances prove.

Since nature and revelation have the same author, when properly interpreted, they will be accordant, and man will ever say as he studies nature, "The heavens declare the glory of God, and the firmament showeth his handiwork. The invisible attributes of God are clearly seen from the beginning of the universe, even his eternal power and divinity being manifested by his creations." As he studies intelligently the Scriptures he will say with the apostle, "The Sacred Writings are able to make man wise unto salvation through faith in Christ Jesus. All writing given by inspiration of God is profitable for doctrine, for correction, for reproof, for instruction in righteousness; and by them the man of God is made perfect and thoroughly furnished unto all good works."

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